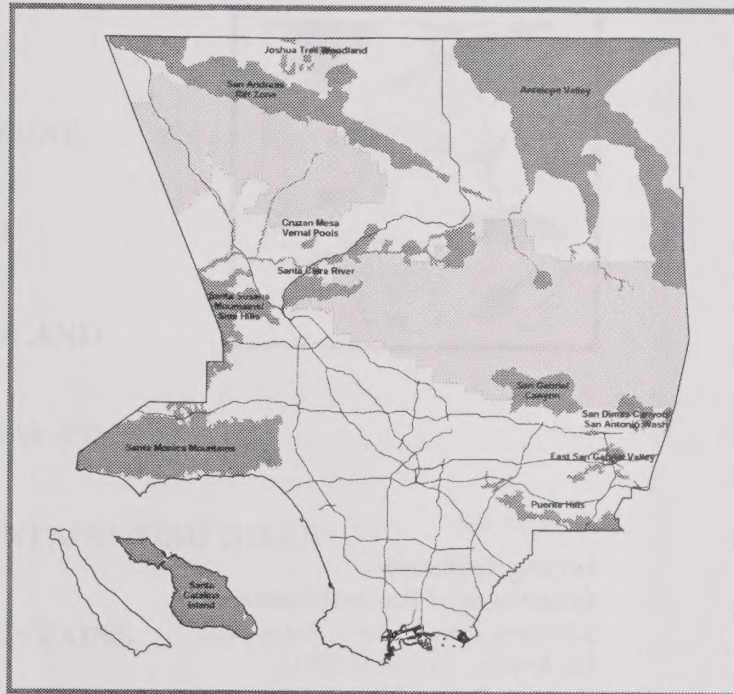


EXECUTIVE SUMMARY OF THE PROPOSED LOS ANGELES COUNTY SIGNIFICANT ECOLOGICAL AREAS



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- Antelope Valley
- San Andreas Rift Zone
- Santa Clara River
- Joshua Tree Woodland
- Cruzan Mesa Vernal Pools
- Santa Susana Mountains/
Simi Hills
- Santa Monica Mountains
- San Gabriel Canyon
- San Dimas Canyon/
San Antonio Wash
- East San Gabriel Valley
- Puente Hills
- Santa Catalina Island

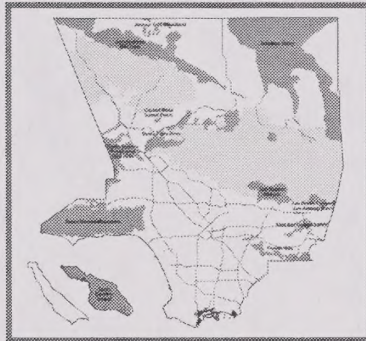
Los Angeles County, California

November 2000



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EXECUTIVE SUMMARY OF THE PROPOSED LOS ANGELES COUNTY SIGNIFICANT ECOLOGICAL AREAS



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Los Angeles County, California

November 2000

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BACKGROUND REPORT

The Los Angeles County Significant Ecological Area (SEA) Study has three purposes: To evaluate existing SEAs for changes in biotic conditions and consider additional areas for SEA status within unincorporated Los Angeles County; to delineate SEA boundaries based upon biotic evaluation; and to propose guidelines for managing and conserving biological resources within these areas.

The “original” SEA report was prepared in 1972 by a committee of scientists from the Los Angeles County Museum of Natural History and local academic institutions. This was done as a background study for the 1973 County General Plan. A second SEA study was completed in 1976 by England and Nelson, Environmental Consultants. The 61 SEAs existing today represent the findings of the 1976 Study, as amended through the adoption of a revised General Plan in 1980. After 20 years, it is necessary to re-evaluate the SEA program as part of the next General Plan amendment.

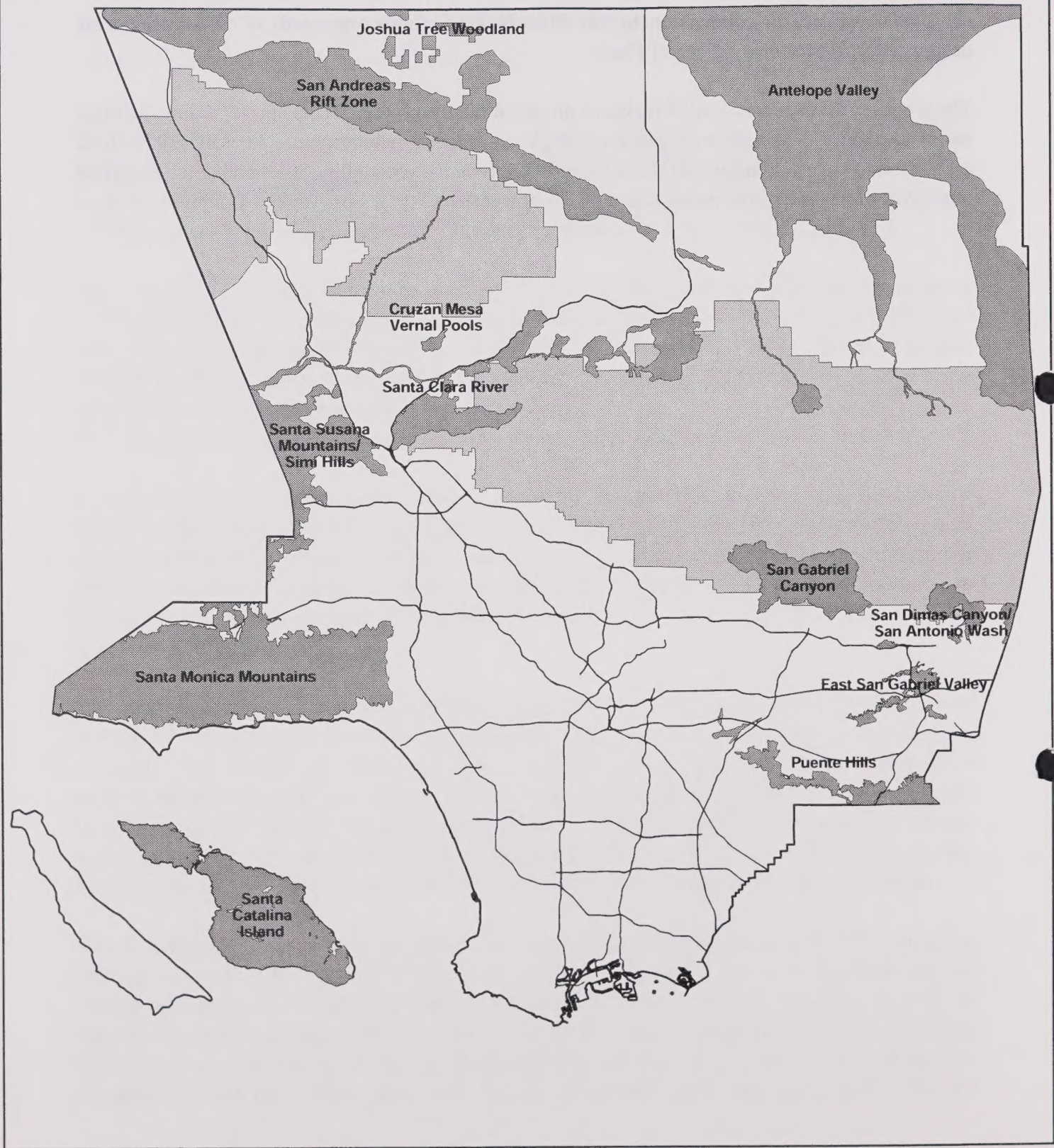
As in 1976, the underlying objective of the SEA program remains the preservation of biotic diversity. Following this objective, it is crucial to identify and designate as proposed SEAs areas that possess examples of biotic resources that cumulatively represent biological diversity. Equally important, this objective has been expanded to include the future sustainability of this diversity through the application of more current practices in conservation planning, primarily by consolidation into larger interconnected SEAs.



The criteria used to identify prospective SEAs were similar to those used in 1976 by England and Nelson. Of the original eight criteria, minor modifications were made to one, and two were omitted from this study without loss to the range of biological diversity subject to this study. The methods used to identify and delineate proposed SEAs was multi-faceted, including: a broad outreach program focused in the government resource agencies, academic institutions, conservation groups, and the general public; a comprehensive database and literature review; an evaluation of existing SEAs in the unincorporated County; the interpretation of aerial photography; and, field study.

The SEA study focused on existing SEAs, within the unincorporated county jurisdiction, and areas nominated for SEA status. Significant Ecological Areas located within cities were not studied, though this analysis recommends that the boundaries of these areas be retained. Significant Ecological Areas remaining within the unincorporated area were consolidated into twelve new areas. These areas were connected to enhance sustainability and biological diversity. As a consequence, the proposed acreage of these areas covers a total of 442,983 acres (unincorporated). This is a

substantial increase in comparison to the 176,174 acres (unincorporated) of SEAs previously designated in 1980 County General Plan.

The proposed SEAs in this study were based on scientifically-grounded concepts regarding their size and connectivity. Most do not focus on a single resource or habitat type. Where feasible, these areas form linkage systems which should greatly improve the probability of achieving the expanded objectives of this study, the preservation of biological diversity in Los Angeles County.



 Proposed Significant Ecological Areas
 Angeles National Forest

Significant Ecological Areas
 Update Study 2000
 Proposed Boundaries

0 55000
 Feet



FORMA Systems
 09/07/00

DIVIDER PAGE

ANTELOPE VALLEY

Location: The proposed Antelope Valley Significant Ecological Area (SEA) lies across the south-central portion of the Antelope Valley. The boundaries extend from tributary creeks to Little Rock and Big Rock Creeks (partially within U.S. Forest Service land) downstream to the valley floor and northward across the historic floodplain to Rosamond, Buckhorn, and Rogers dry lakes, on the Los Angeles/Kern County boundary.

Description: The proposed Antelope Valley SEA covers 222,325 total acres and encompasses a wide variety of topographic features. The orientation and extent of the proposed SEA recognizes the importance of the Little Rock and Big Rock Creek watershed contributions to the surface and subsurface hydrology of the Antelope Valley, and the desert dry lakes. It also encompasses the remaining undeveloped portions of Lovejoy Butte and all of Alpine, Piute, Black, and Saddleback Buttes. Outside of Los Angeles County jurisdiction, the functional area of the SEA extends into the Angeles National Forest along the southern margin and into Kern County to encompass the remainder of the dry lake playas and their watershed areas. At its southern edge the SEA includes the headwaters and important lower tributary drainages for Little Rock and Big Rock Creeks. This area supports healthy desert montane riparian habitats, typically with willow, cottonwood, and alder (along the creek channels) and open formations of western sycamore (on the alluvial plains). Where the washes approach the dry lakes (particularly Rosamond Dry Lake) sufficient subsurface water once existed supporting dense mesquite bosque formations and formed playa lakes, seasonal pools and sheet flows. While most of these unique features have been lost to land conversion or changes in groundwater levels, some of these formations persist around the margins of the lakes. Piute Ponds, on the southwestern margin of Rosamond Dry Lake, support freshwater marsh and alkali grassland habitat, providing essential wintering areas and resident habitat for waterfowl, wading birds, marshland birds, and a variety of other vertebrate species. The majority of the 222,325 acres proposed for the Antelope Valley SEA are within unincorporated Los Angeles County accounting for approximately 197,634 acres. Other jurisdictions within the SEA include: 9,887 acres within Angeles National Forest; 11,074 acres within the City of Palmdale; and 3,730 acres within the City of Lancaster.

Existing Land Use: The proposed SEA currently supports a limited diversity of land uses, mostly agriculture, military-industrial complexes, and dispersed rural residential developments. The southern portions of the tributary drainages are on undisturbed open space either within the Angeles National Forest or unincorporated portions of Los Angeles County. A large area in the central portion of the SEA lies within properties currently proposed for Palmdale Airport facilities. Most of the large,

northern portion of the SEA is undisturbed open space or agriculture containing a few scattered rural residential developments; a portion is also located within Edwards Air Force Base.

Ownership: Land ownership within the proposed SEA consists of both public and private holdings. Public lands include a portion of the SEA along the northern flank of the San Gabriel Mountain range within the Angeles National Forest, as well as numerous County wildlife and wildflower sanctuaries, Saddleback Butte State Park, and Edwards AFB. Portions of the SEA are also located within incorporated boundaries of the cities of Palmdale and Lancaster. The remaining lands within the SEA are mostly private holdings. Individual private land ownerships within the SEA are estimated to range from less than one acre to parcels in excess of one square mile.

Vegetation: Plant communities within the proposed SEA include: mixed conifer-canyon/live oak woodland and forest, chaparral, desert scrub, creosote bush scrub, joshua tree woodland, native and non-native desert grassland, southern willow scrub, southern cottonwood-willow riparian forest, sycamore-alder woodland, Mojave riparian woodland, pinyon-juniper woodland, juniper woodland, alkali marsh, fresh water marsh, desert alluvial fan scrub, desert wash, mesquite bosque, fallow agricultural land, and disturbed.

Wildlife: Wildlife within the proposed SEA is diverse and relatively abundant due to the transition from lower montane riparian systems to desert wash and dry lake playa habitats; this is commensurate with the relatively large acreage of natural open space within the proposed SEA boundaries. The mosaic of vegetation communities within the proposed SEA constitutes broad, ecotonal and desert ecosystems for a diverse array of native wildlife. These vegetation communities are also a part of the larger regional ecological systems.

Wildlife Movement: This proposed SEA provides a direct habitat linkage zone for wildlife movement between the higher elevations of the San Gabriel Mountains and the entire Antelope Valley-Owens Valley-southern Sierran interchange. The desert riparian corridor extends from the watershed basins of the two largest drainages exiting the north slope of the San Gabriel Mountain range downslope through the foothills, terminating across the valley floor. The desert-montane transect segment of the SEA extends from the National Forest above Piñon Hills northward across relatively undeveloped desert scrub and joshua tree formations to Black Butte, and then across approximately seven miles of open scrub and degraded former desert seep formations to the southeastern slopes of Saddleback Butte. Most of the terrain within the proposed SEA boundaries is comprised of historic floodplains, open washes, desert scrub and joshua tree woodlands. These areas offer relatively free movement pathways and habitat linkages, accessible surface water or shallow groundwater, and/or riparian habitat cover. Due to the fact that these washes are mostly unchannelized, they provide easy entry and exit through the different habitat zones.

Sensitive Biological Resources: Sensitive plant communities within the proposed SEA include: mesquite bosque, joshua tree woodland, desert grassland, southern willow scrub, cottonwood-willow woodland, fresh-water marsh, alkali marsh, Mojave riparian forest, desert alluvial fan scrub, and desert alluvial wash. The SEA, as proposed, includes a number of sensitive plant and animal species both known to exist or potentially occurring within the SEA. These include southwestern arroyo toad, southwestern pond turtle, California desert tortoise, Mohave ground squirrel, western snowy plover, and many others.

Regional Biological Value: The proposed SEA meets several designation criteria and supports many regional biological values (see Criteria Table at the end of this summary). These values include: the watershed and upper tributary streams contain riparian woodlands, marshes and playa lakes; the upper portions of the two creeks have year-round water, providing breeding sites for amphibians, and permanent water resources for wildlife species along the north face of the San Gabriel range; open ponds and seasonal playa lakes provide essential foraging and wintering sites for migrating birds otherwise not found in the Mojave Desert; nesting sites exist for numerous sensitive bird species, including the federally threatened western snowy plover; the buttes and their sand sheet habitats represent unique habitats in the otherwise level desert floodplain, providing nesting, roosting, denning, and refuge sites, and perches for birds of prey; the desert riparian corridor provides shelter and open passage for mobile species moving within and between habitats along the gradient; desert riparian woodlands offer roosting and nesting opportunities for raptors and migratory songbirds; the ponds, seasonal playa lakes and dry lakes attract huge numbers of migrating birds and support breeding populations of wading birds, shorebirds, and waterfowl; the portion of Little Rock Creek above Little Rock Reservoir is the only known Antelope Valley breeding locality for the endangered southwestern arroyo toad; and, the drainages provide the primary subterranean hydrological recharge for this portion of the Antelope Valley aquifer.

Recommended Management Practices: Proposed new development within the Antelope Valley SEA should be designed to be highly compatible with the hydrology of the Little Rock and Big Rock Creek washes/floodplains and the continued ecological function of the component biological resources described above; retention of existing natural biotic resources should be ensured. In order to preserve the integrity of the SEA, the proposed comprehensive management practices described in the *Los Angeles County SEA Update Study Background Report* are recommended. These practices address:

- Core habitat
- Habitat linkages and wildlife corridors
- Fire management

- Public access and recreation
- Infrastructure
- Wetlands, riparian habitats, and streambeds
- Non-riparian/upland woodlands

In addition to the comprehensive management practices the following proposed management practices are recommended specifically for the proposed Antelope Valley SEA:

- Limit development densities to one residential unit per ten acre parcel, and constrain development design, where feasible, to cluster dwelling configuration along existing roadways in order to minimize clearing associated with fuel management, and to reduce the need for grading, fencing, and other habitat disturbances.
- Retain habitat linkages within Little Rock and Big Rock Washes as well as the desert-montane transect in keeping with proposed General Management Practices.
- Maintain the habitat of core populations of listed species including the federally endangered southwestern arroyo toad, the federally threatened California desert tortoise, and the state threatened Mohave ground squirrel as well as adequate buffers to eliminate or minimize adverse impacts.
- Retain rare communities with adequate buffers so as to allow for the long term viability and integrity of plant communities as a whole. Rare communities include: mesquite bosque, joshua tree woodland, desert grassland, southern willow scrub, cottonwood-willow woodland, fresh-water marsh, alkali marsh, Mojave riparian forest, desert alluvial fan scrub, and desert alluvial wash.
- Carefully review proposals for new or increased groundwater extraction to prevent overdrafting of the shallow aquifer supporting the dry lakes and riparian habitat areas. The biological functionality of these areas is directly related to the supporting hydrology which originates from the surrounding basin slopes and from the groundwater flows of Little Rock and Big Rock Creeks.
- Require agricultural activities to employ the best management practices (BMPs) recognized in the industry; avoid unnecessary direct impacts to habitat, and conform to legal standards for all pesticide, herbicide and fertilizer applications.
- Prohibit bridges over the Little Rock or Big Rock Creeks except for “flying” type bridges with wide, open spans beneath, that neither impinge nor alter the channel characteristics below.

**CRITERIA ANALYSIS
OF THE PROPOSED ANTELOPE VALLEY SEA**

Criterion	Status	Justification
A) The habitat of core populations of endangered or threatened plant or animal species.	Met	The SEA encompasses: the only known Antelope Valley population of the federally endangered southwestern arroyo toad; much of the Los Angeles County ranges of the federally threatened California desert tortoise and the state threatened Mohave ground squirrel.
B) On a regional basis, biotic communities, vegetative associations, and habitat of plant or animal species that are either unique or are restricted in distribution.	Met	The mesquite bosque, sand sheet, rocky butte, desert riparian woodland, and alluvial fan sage scrub habitats all are unique and regionally restricted biotic communities encompassed by the proposed SEA. Desert species not, or rarely, found elsewhere in the County, such as verdin, black-throated sparrow, Mojave rattlesnake, desert banded gecko, Leech's prionid borer, and mesquite borer, occur within these habitats. Additionally, the ponds and other riparian and wetland systems in the northern portion of the SEA support numerous water birds and raptors not resident elsewhere in the County.
C) Within Los Angeles County, biotic communities, vegetative associations, and habitat of plant or animal species that are either unique or are restricted in distribution.	Met	The desert alluvial fan sage scrub, joshua tree woodland, desert riparian woodland, mesquite bosque, alkali meadow/marsh, desert freshwater marsh, playa lake and seasonal pool habitats are located within, are unique to, or best represented within, the SEA.
D) Habitat that at some point in the life cycle of a species or group of species, serves as concentrated breeding, feeding, resting, migrating grounds and is limited in availability either regionally or in Los Angeles County.	Met	The freshwater habitats within and around Rosamond, Buckhorn and Rogers dry lake basins have large concentrations of migratory and resident waterfowl and birds of prey, providing them with essential seasonal and permanent resources. The rocky desert buttes are unique roosting, sheltering, perching and nesting sites for birds of prey.
E) Biotic resources that are of scientific interest because they are either an extreme in physical/geographical limitations, or represent unusual variation in a population or community.	Not Met	Although the SEA does not contain biotic resource that are clearly an extreme in physical/geographical limitations, or represent unusual variation in a population or community, it is of scientific interest due to the large undeveloped desert communities and the transition zones between them.
F) Areas that would provide for the preservation of relatively undisturbed examples of the original natural biotic communities in Los Angeles County.	Met	The proposed Antelope Valley SEA encompasses some of the most biotically intact acreage of joshua tree woodland, desert riparian woodland, and desert alluvial fan sage scrub remaining in the County.



- Proposed SEA Boundary
- Existing SEA Boundary
- Anges National Forest

**Antelope Valley
Significant Ecological Area
Existing and Proposed Boundaries**

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DIVIDER PAGE

SAN ANDREAS RIFT ZONE

Location: The proposed San Andreas Rift Zone Significant Ecological Area (SEA) is located in the western portion of the Antelope Valley. Most of this area is situated within the jurisdiction of unincorporated Los Angeles County. The SEA includes a small portion of the western Tehachapi foothills, then stretches in a southeasterly direction along the San Andreas Fault to include Quail Lake, the northern foothills of Liebre Mountain and Sawmill Mountain, large portions of Portal Ridge, Leona Valley, Ritter Ridge, Fairmont and Antelope Buttes, Anaverde Valley, Lake Palmdale, and terminates at Barrel Springs.

Description: The proposed San Andreas Rift Zone SEA covers approximately 89,698 acres and includes a variety of topographic features. The location and orientation of the proposed SEA coincides with a segment of the San Andreas Rift Zone. At its northwest end, the SEA encompasses a portion of the south-facing foothills of the Tehachapi Mountains. Moving southeast, the SEA contains the north-facing slopes of Liebre and Sawmill Mountains. The upper slopes of these mountains are densely vegetated with chaparral and scattered mixed woodlands. The lower slopes are more sparsely vegetated with scrub species and eventually mixed scrub and grasslands moving onto the flatter valley floor. Most of this portion of the SEA is undeveloped open space with few scattered residential developments. The majority of land within the proposed 89,698-acre SEA lies within unincorporated Los Angeles County accounting for approximately 68,722 acres. Other jurisdictions include approximately 15,285 acres within the Angeles National Forest, 5,476 acres within the City of Palmdale, and 215 acres within the City of Lancaster.

Existing Land Use: The proposed SEA currently supports a variety of land uses. The majority of the land use within the SEA is undisturbed open space either within the Angeles National Forest or unincorporated Los Angeles County. Other uses include moderate to high density residential development, rural residential development, ranching and agricultural use.

Ownership: Landownership within the proposed SEA consists of both public and private holdings. Public lands include that portion of the SEA along Liebre and Sawmill Mountains, within the Angeles National Forest, as well as an area which is within the State owned Antelope Valley California Poppy Reserve. The remaining land within the SEA is privately owned. Individual land ownerships within the SEA are estimated to range from less than one acre parcels to several square mile parcels.

Vegetation: Plant communities within the proposed SEA include: chaparral, desert scrub, native and non-native grassland, wildflower field, southern willow scrub, southern cottonwood-willow riparian forest, foothill woodland, juniper woodland, valley oak woodland, bigcone spruce-canyon oak woodland, alkali marsh, fresh water marsh, alluvial wash, and disturbed communities.

Wildlife: Wildlife within the proposed SEA is diverse and abundant due to the large acreage of natural open space and the diversity of habitat types. The entire mosaic of vegetation communities within the proposed SEA and adjoining areas constitutes a functional ecosystem for a large variety of native wildlife species; this applies to the SEA and as well as the regional ecosystem.

Wildlife Movement: The proposed San Andreas Rift Zone SEA encompasses several important linkages for wildlife movement including: the foothills in the western most tip of the proposed SEA that link the San Gabriel Mountains and the Tehachapi Mountains; large drainages extending onto the Antelope Valley floor towards resources such as the Fairmont and Antelope Buttes; and Amargosa Creek facilitating east-west wildlife movement through the Liebre Mountains, Portal Ridge, and Ritter Ridge.

Sensitive Biological Resources: Sensitive plant communities within the proposed SEA include: joshua tree woodland, valley oak woodland, native grassland, wildflower field, southern cottonwood-willow riparian forest, fresh-water marsh, alkali marsh, alluvial wash, and southern willow scrub. A large number of sensitive plant and animal species have been observed or are expected to occur within the SEA including: Mexican flannelbush, Tehachapi slender salamander, California red-legged frog, southwestern pond turtle, California condor, Mohave ground squirrel, Tehachapi pocket mouse and many others.

Regional Biological Value: The proposed SEA meets several designation criteria and incorporates many regional biological values (see Criteria Table on page 10, 17, 25, 32, 39, 45, 52, 59, 65, 71, 85). These values include: a series of marshes and sinks along the San Andreas Rift Zone, which are both unique and restricted in distribution; lakes and other wetland areas along the San Andreas Rift Zone providing breeding habitat for amphibians and foraging for migrating birds scarcely found on slopes adjacent to the Mojave Desert; the Fairmont and Antelope Buttes, representing a unique habitat due to their close proximity to several ecologically significant regions, the vital habitat they provide to wide ranging species for nesting, roosting, denning, refuge, and concentrated wintering grounds for birds of prey; the confluence of three major geographical areas, the Mojave Desert, the San Gabriel Mountains, and the Tehachapi Mountains producing the most unique and diverse flora found in the County, serving as a transition between desert, foothill, and montane environments; the southern limit of the foothill woodland community, blue oak, gray or foothill pine, and California buckeye, rare relic stands of Great Basin sage brush scrub, and rare wildflower fields. The transition of several habitat types provide valuable opportunities for educational and scientific analysis including creosote bush scrub, joshua tree/California juniper mixed woodland, and desert chaparral.

Recommended Management Practices: Proposed new development within the proposed San Andreas Rift Zone SEA should be designed to be highly compatible with the continued ecological function of each of the component biological resources described above. In order to preserve the integrity of the SEA, the proposed comprehensive management practices described in the *Los Angeles County SEA Update Study 2000 Background Report* are recommended. These practices address:

- Core habitat
- Habitat linkages and wildlife corridors
- Fire management
- Public access and recreation
- Infrastructure
- Wetlands, riparian habitats, and streambeds
- Non-riparian/upland woodlands

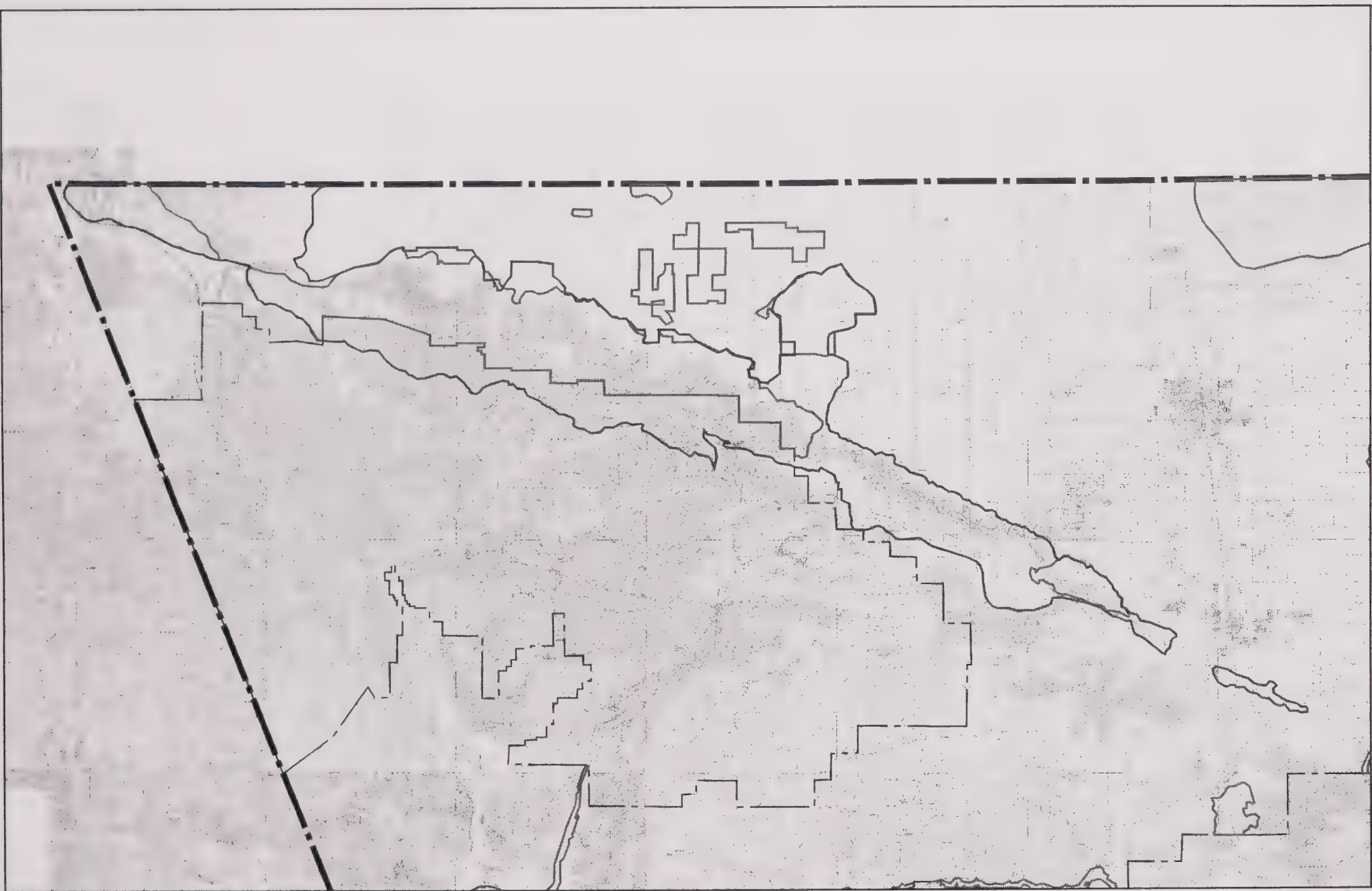
In addition to the comprehensive management practices the following proposed management practices are recommended specifically for the proposed San Andreas Rift Zone SEA:




- Limit development densities to one residential unit per ten acre parcel, and constrain development design, where feasible, to cluster dwelling configuration along existing roadways in order to minimize clearing associated with fuel management, and to reduce the need for grading, fencing, and other habitat disturbances.
- Retain rare communities with adequate buffers so as to allow for the long term viability and integrity of plant communities as a whole. Rare communities include: Joshua tree woodland, valley oak woodland, native grassland, wildflower field, southern cottonwood-willow riparian forest, fresh-water marsh, alkali marsh, alluvial wash, and southern willow scrub.
- Require agricultural activities to employ the best management practices (BMPs) recognized in the industry; avoid unnecessary direct impacts to habitat, and conform to legal standards for all pesticide, herbicide and fertilizer applications.
- Retain broad transition zones between the different habitat types of the Mojave Desert, the San Gabriel Mountains, and the Tehachapi Mountains in such a way as to allow for free movement of a unique mix of species (plants and less-mobile wildlife).

- Retain connectivity and linkage values between large open space units such as between the San Gabriel Mountains and the Tehachapi Mountains and between the Fairmont and Antelope Buttes and Portal Ridge in keeping with the proposed General Management Practices.
- Retain existing communities on and surrounding Fairmont and Antelope Buttes to avoid the discouragement of raptor species and loss of wildflower diversity. Although raptors are able to forage in surrounding agricultural fields, flatlands adjacent to the Buttes should avoid further conversion of natural habitat to avoid loss of diversity in small mammal prey.
- Retain connectivity and linkage values between the Fairmont and Antelope Buttes and Portal Ridge.

**CRITERIA ANALYSIS
OF THE PROPOSED SAN ANDREAS RIFT ZONE SEA**

Criterion	Status	Justification
A) The habitat of core populations of endangered or threatened plant or animal species.	Not met	No habitat of known core populations of listed species is present within the proposed SEA.
B) On a regional basis, biotic communities, vegetative associations, and habitat of plant or animal species that are either unique or are restricted in distribution.	Met	Marshes and sinks along the San Andreas Rift Zone which are unique and restricted in distribution; Fairmont and Antelope Buttes represent a unique habitat due to their location as the most westerly buttes of the Mojave Desert and their close proximity to several geographic regions.
C) Within Los Angeles County, biotic communities, vegetative associations, and habitat of plant or animal species that are either unique or are restricted in distribution.	Met	The most unique and diverse flora found in the County representing a transition between desert, foothill, and montane environments; the southern limit of the foothill woodland community, blue oak, gray or foothill pine, and California buckeye; rare relic stands of Great Basin sage brush scrub; and rare wildflower fields.
D) Habitat that at some point in the life cycle of a species or group of species, serves as concentrated breeding, feeding, resting, or migrating grounds and is limited in availability either regionally or in Los Angeles County.	Met	The Fairmont and Antelope Buttes provide vital habitat to many wide ranging species for nesting, roosting, denning, and refuge, concentrated wintering grounds for birds of prey; lakes and other wetland areas along the San Andreas Rift Zone provide rare breeding habitat for amphibians and feeding habitat for migrating birds.
E) Biotic resources that are of scientific interest because they are either an extreme in physical/geographical limitations, or represent unusual variation in a population or community.	Met	The transition of several habitat types including: creosote bush scrub, joshua tree/California juniper mixed woodland, and desert chaparral makes it a valuable for educational and scientific reasons; the close proximity of the Fairmont and Antelope Buttes to the San Gabriel Mountains renders them unique in their species composition and ecological relationships and, therefore, of interest to scientists; the concentrated diversity of vegetation types creates an outstanding opportunity for educational use.
F) Areas that would provide for the preservation of relatively undisturbed examples of the original natural biotic communities in Los Angeles County.	Met	The slopes of Ritter Ridge support one of the best remaining stands of joshua tree and California juniper; large, mostly undisturbed examples of desert, foothill, and montane environments.



-  Proposed SEA Boundary
-  Existing SEA Boundary
-  Angeles National Forest

**San Andreas Rift Zone
Significant Ecological Area
Existing and Proposed Boundaries**

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Feet

FORMA Systems
09/06/00

DIVIDER PAGE

SANTA CLARA RIVER

Location: The proposed Santa Clara River Significant Ecological Area (SEA) extends the full length of the Santa Clara River within Los Angeles County, most reaches lying within unincorporated areas, but the western portion passing through the cities of Santa Clarita and Los Angeles. The overall boundaries extend upstream along several major tributary creeks and where contiguous drainage areas connect to the river basin through open habitat, the proposed SEA boundary embraces all or major portions of these watersheds. The proposed SEA incorporates existing SEA numbers 19, 23 and 61.

Description: The proposed Santa Clara River SEA covers 37,774 acres and with the watershed extensions encompasses a wide variety topographic features and habitat types. The SEA encompasses the essential watershed system of the Santa Clara River, from its headwaters to the point at which it exits Los Angeles County. The eastern portion of the SEA surrounds Kentucky Springs and Aliso Canyon watersheds, follows the river channel downstream through the Acton basin, taking in other side drainages and significant rock outcroppings, then loops around the Vasquez Canyon watershed and includes Vasquez Rocks County Natural Area, while the southern boundary encompasses Bear Canyon and portions of Oak Spring Canyon. The southern boundary extends to encompass the remaining natural areas of the Sand Canyon watershed, along with major habitat features and watersheds of Elsmere, Whitney, Placerita and Bear canyons. From Sand Canyon west the SEA boundary extends to San Francisquito Canyon, wherein the northern boundary extends to the headwaters of San Francisquito Creek, then returns to the river channel and proceeds west to the confluence with Castaic Creek, where it draws around the lower portion of Castaic Creek, and then follows the Santa Clara River channel to the Los Angeles/Ventura County line. Roughly half of the proposed SEA is within unincorporated Los Angeles County accounting for approximately 19,408 acres. Other jurisdictions within the SEA include: 16,895 acres within Angeles National Forest; 15 acres within the City of Los Angeles; and 1,456 acres within the City of Santa Clarita.

Existing Land Use: The proposed Santa Clara River SEA encompasses, or is adjacent to, a myriad of existing land uses of varying intensities, including public and private campgrounds, County Natural Areas Parks, dispersed and clustered rural residential development, mobile home parks, kennels, wild animal compounds, surface mining for minerals and aggregate, light industrial facilities, munitions research facilities, and urban density residential development. Soledad Canyon Road parallels the alignment for much of the eastern two-thirds of the SEA, but portions of the roadway form the outside boundary of the proposed SEA.

Ownership: Land ownership within the proposed SEA consists of both public and private holdings. Public lands include portions of the Angeles National Forest, and Placerita Canyon and Vasquez Rocks County Natural Areas. Portions of the SEA also lie within the incorporated boundaries of the cities of Santa Clarita and Los Angeles. The remaining lands within the SEA consist of private ownerships. Individual private land holdings within the SEA are estimated to range from less than one acre to parcels in excess of 1,000 acres.

Vegetation: Plant communities within the proposed SEA include: bigcone spruce-canyon oak forest, coast live oak woodland, coast live oak riparian forest, chaparral, coastal sage scrub, coastal sage scrub-chaparral mixed scrub, non-native and native grasslands, alluvial fan sage scrub, southern cottonwood-willow riparian woodland and forest, southern sycamore-alder woodland, southern willow scrub, vernal pool, pinyon-juniper woodland, juniper woodland, freshwater marsh, and disturbed.

Wildlife: Wildlife within the proposed Santa Clara River SEA is very diverse and abundant, due to the inclusion of significant upland, watershed and primary tributary creek areas adjacent to the river basin, and largely intact riparian systems extending from to the margin of the Mojave desert to the Los Angeles/Ventura County line within the proposed SEA boundaries. The transitional mosaic of vegetation communities found along the east-west alignment of the river basin and adjoining areas provides ecosystem values both ecotonal and distinctive, for a diverse array of native wildlife, within the SEA and into the connecting regional ecological systems.

Wildlife Movement: The proposed Santa Clara River SEA encompasses the single most direct wildlife movement corridor and habitat linkage zone for wildlife movement between the Mojave Desert and higher elevations of the San Gabriel Mountains, the southern Sierran interchange zone, the Santa Susana Mountains, coast ranges, and Oxnard coastal plain. The river's riparian corridor extends from its watershed and tributary basins westward along the northern foothills of the San Gabriel Mountains, through the Santa Clarita Valley, where it is joined by the San Francisquito and Castaic Creek drainages, and then into Ventura County. The functional limits of the SEA extend on through Ventura County, pick up several other tributaries, and reach the Pacific Ocean at Ventura. San Francisquito Creek extends north into the Angeles National Forest to its headwaters in Green Valley. The segments of the SEA which encompass Vasquez Canyon and the Elsmere, Whitney, Placerita, Bear, and upper Sand canyon drainages extend the corridor and habitat linkage values of the SEA from the river basin into the western terminus of the San Gabriel range. The Santa Clara River and tributary systems mapped within the proposed SEA boundaries offer relatively free movement pathways and habitat linkages, with few barriers to terrestrial travel, accessible surface water or shallow groundwater, and/or riparian habitat cover. And, because the Santa Clara River basin system is unchannelized for almost all of its length, and has natural bottom substrates for

the entire length of all tributaries, it provides easy entry and exit for wildlife moving in and between the different habitat zones.

Sensitive Biological Resources: Sensitive plant communities within the proposed SEA include: native grassland, coast live oak riparian forest, southern willow scrub, bigcone spruce-canyon oak forest, southern sycamore-alder woodland, southern cottonwood-willow riparian woodland and forest, freshwater marsh, alluvial fan sage scrub, and vernal pool. The SEA, as proposed, includes a number of sensitive plant and animal species occurring or potentially occurring within the SEA, such as: slender-horned spineflower, unarmored three-spined stickleback, Santa Ana sucker, California red-legged frog, southwestern arroyo toad, southwestern pond turtle, least Bell's vireo, southwestern willow flycatcher, and many others.

Regional Biological Value: The proposed SEA meets several designation criteria and supports many regional biological values (see Criteria Table at the end of this summary). These values include: habitat for core populations of slender-horned spineflower and unarmored three-spined stickleback; the watershed and upper tributary streams for the principal remaining natural hydrological system within Los Angeles County, its riparian formations, freshwater marshes, alluvial fan sage scrub, and intact upland communities. Portions of the river and its tributary creeks have year-round surface water, providing breeding sites for sensitive amphibians, and permanent water resources for wildlife species moving along the river corridors; open ponds and marshes provide foraging, nesting and wintering sites for riparian-obligate migratory songbirds; the uplands offer linkage zones for species movement to and from the river, as well as representing excellent examples of the respective habitat types, and provide wide-ranging species with nesting, roosting, denning, and refuge sites near the freshwater corridor; the riparian woodlands and forests provide roosting and nesting opportunities for numerous raptors; and, the drainages together provide the primary subterranean aquifer for water resources between the headwaters and the Oxnard plain.

Recommended Management Practices: Proposed new development within the proposed Santa Clara River SEA should be designed to be highly compatible with the continued ecological function of each of the component biological resources described above. Development has pushed to the margins of the Santa Clara River and its tributaries in numerous reaches, in some areas compromising the biological functionality and water characteristics of the river. In order to preserve the integrity of the SEA, the proposed comprehensive management practices described in the *Los Angeles County SEA Update Study 2000 Background Report* are recommended. These practices address:

- Core habitat
- Habitat linkages and wildlife corridors

- Fire management
- Public access and recreation
- Infrastructure
- Wetlands, riparian habitats, and streambeds
- Non-riparian/upland woodlands

In addition to the comprehensive management practices the following proposed management practices are recommended specifically for the proposed Santa Clara River SEA:

- Limit development densities to one residential unit per ten acre parcel, and constrain development design, where feasible, to cluster dwelling configuration along existing roadways in order to minimize clearing associated with fuel management, and to reduce the need for grading, fencing, and other habitat disturbances.
- Limit new development to well outside the existing floodplain margins (as identified from biological, hydrological, and geological evidence, along with Federal Emergency Management Agency assessments), so as to obviate the necessity for further bank stabilization.
- Maintain the habitat of core populations of listed species including the federally endangered unarmored three-spined stickleback and red-legged frog and the federally and state endangered slender-horned spinyflower as well as adequate buffers to eliminate or minimize adverse impacts.
- Retain rare communities with adequate buffers so as to allow for the long term viability and integrity of plant communities as a whole. Rare communities include: native grassland, coast live oak riparian forest, southern willow scrub, bigcone spruce-canyon oak forest, southern sycamore-alder woodland, southern cottonwood-willow riparian woodland and forest, freshwater marsh, alluvial fan sage scrub, and vernal pool.
- Carefully review proposals for new or increased groundwater extraction to prevent overdrafting of the shallow aquifer supporting the riparian habitat areas. The biological functionality of these areas is directly related to the supporting hydrology which originates from the surrounding basin slopes and from the groundwater flows of Santa Clara River.
- Require agricultural activities to employ the best management practices (BMPs) recognized in the industry; avoid unnecessary direct impacts to habitat, and conform to legal standards for all pesticide, herbicide and fertilizer applications.

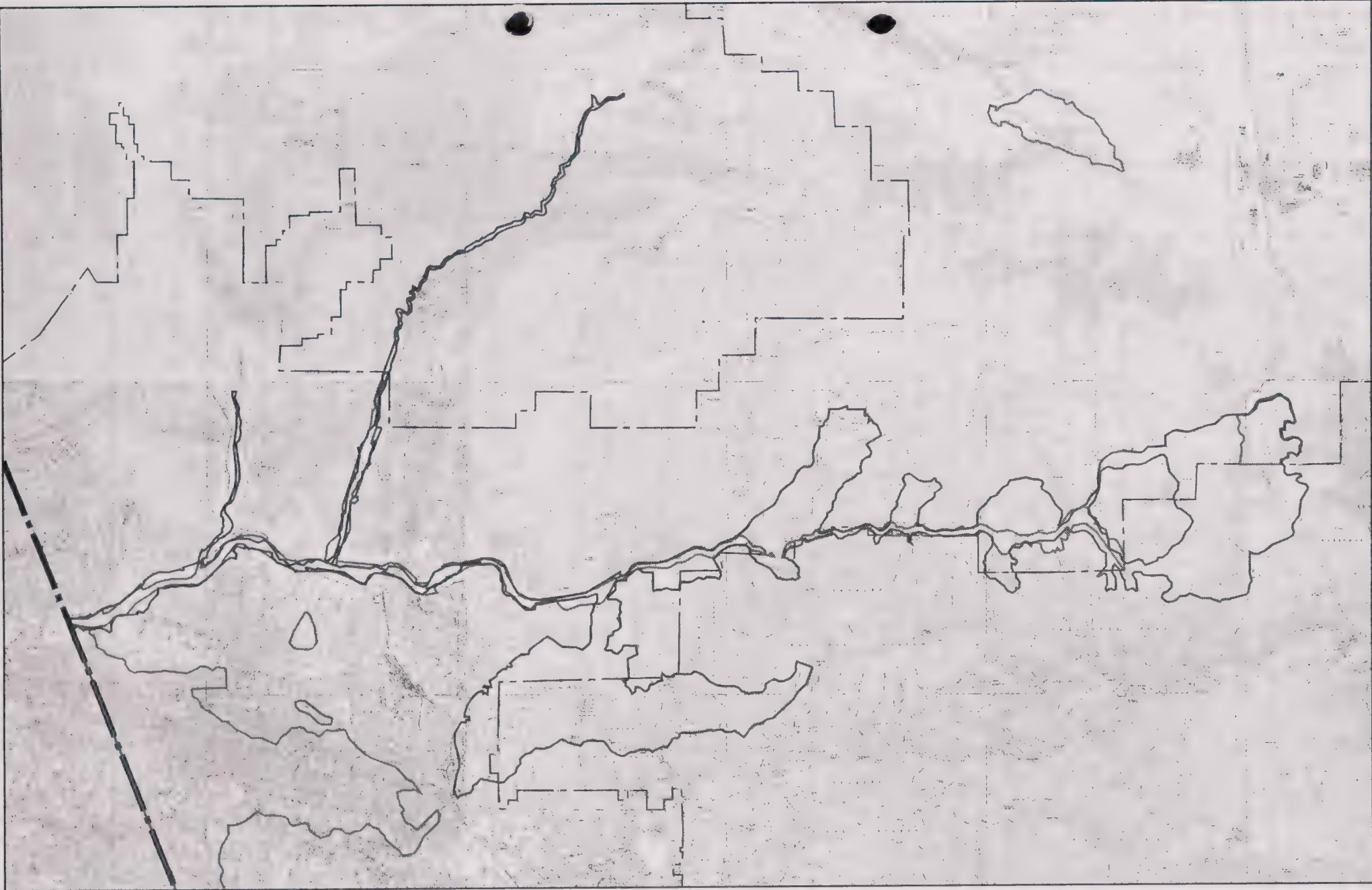
- Retain connectivity and linkage values of the Santa Clara River and its major tributaries over their entire alignments, and between the Santa Clara River and the Santa Susana Mountains.
- Prohibit bridges over the Santa Clara River except for “flying” type bridges with wide, open spans beneath, that neither impinge nor alter the channel characteristics below.

**CRITERIA ANALYSIS
OF THE PROPOSED SANTA CLARA RIVER SEA**

Criterion	Status	Justification
A) The habitat of core populations of endangered or threatened plant or animal species.	Met	The only natural population of the federally endangered unarmored three-spined stickleback is within the Santa Clara River and its tributaries. The population of federally and state endangered slender-horned spinyflower in Bee Canyon is one of fewer than seven known occurrences for this species, one of only two known occurrences in the County, and one of its largest populations.
B) On a regional basis, biotic communities, vegetative associations, and habitat of plant or animal species that are either unique or are restricted in distribution.	Met	The bigcone spruce-canyon oak forests above Placerita Canyon, the vernal pool in the Placerita Canyon-Sand Canyon divide, the native grassland formations on the so-called Golden Valley Ranch (upper Placerita Canyon), and the alluvial fan sage scrub formations of lower San Francisquito Canyon, Kentucky Springs and Acton are unique and regionally restricted biotic communities within the proposed SEA. Additionally, the riparian forests and woodlands along the Santa Clara River are among the most extensive, diverse and intact formations in Southern California. Rare aquatic species, such as the unarmored three-spined stickleback, Santa Ana sucker, red-legged frog, least Bell's vireo, summer tanager, spinyflower, and many others represented within the proposed SEA are found nowhere else in the region.
C) Within Los Angeles County, biotic communities, vegetative associations, and habitat of plant or animal species that are either unique or are restricted in distribution.	Met	The cottonwood-willow forests and woodlands, alluvial fan sage scrub, coast live oak riparian forest, and bigcone spruce-canyon oak forest communities are best represented in Los Angeles County within the proposed SEA.
D) Habitat that at some point in the life cycle of a species or group of species, serves as concentrated breeding, feeding, resting, or migrating grounds and is limited in availability either regionally or in Los Angeles County.	Met	The Santa Clara River basin affords breeding opportunities for numerous species otherwise not known to breed within Los Angeles County, including California red-legged frog, summer tanager, southwestern willow flycatcher, and the unarmored three-spined stickleback. The extensive riparian areas shelter dozens of migrant songbird species during Winter, including high concentrations of white-crowned and golden-crowned sparrows, fox sparrow, yellow-rumped warbler, dark-eyed junco, and sharp-shinned hawk. The proposed SEA embraces the river corridor and the linkage zones considered essential to insuring connectivity and resource values for many of the wildlife species present within the Los Angeles County portion of the Santa Clara River. The proposed SEA embraces the river corridor and the linkage zones considered essential to insuring connectivity and resource values for many of the wildlife species present within the Los Angeles County portion of the Santa Clara River.

**CRITERIA ANALYSIS
OF THE PROPOSED SANTA CLARA RIVER SEA
(CONTINUED)**

Criterion	Status	Justification
E) Biotic resources that are of scientific interest because they are either an extreme in physical/geographical limitations, or represent unusual variation in a population or community.	Not met	Although there are many rare biotic resources within the proposed SEA, this criteria is not met due to the lack of extremes in physical/geographical limitations, or representations of unusual variation in a population or community.
F) Areas that would provide for the preservation of relatively undisturbed examples of the original natural biotic communities in Los Angeles County.	Met	The proposed Santa Clara River SEA encompasses some of the highest quality, least disturbed and biotically intact acreage of bigcone spruce-canyon oak forest, riparian forest and woodland, coastal sage scrub, and alluvial fan sage scrub remaining in the county, and one of only three known vernal pools in the County.



- Proposed SEA Boundary
- Existing SEA Boundary
- Angeles National Forest

**Santa Clara River
Significant Ecological Area
Existing and Proposed Boundaries**

0 19100
Feet

FORMA Systems
09/07/00

DIVIDER PAGE

JOSHUA TREE WOODLAND

Location: The proposed Joshua Tree Woodland Significant Ecological Area (SEA) is located in the western portion of the Antelope Valley west and northwest of the Antelope Valley California Poppy Reserve in an unincorporated area of Los Angeles County.

Description: The proposed Joshua Tree Woodland SEA covers 4,732 acres on the Antelope Valley floor between the Tehachapi Mountains and western San Gabriel Mountains and incorporates the undisturbed portions of existing SEA number 60. The topography of the SEA is flat with elevations varying less than 200 feet within its approximately 7.4 square mile area. The location and orientation of the proposed SEA represents a matrix of remnant stands of joshua trees among a patchwork of disturbed areas.

Existing Land Use: Land use within the proposed Joshua Tree Woodland SEA consists of undisturbed open space vegetated with joshua tree woodlands. Adjacent land uses consists of agricultural uses, ranches, and rural residential development and scattered undisturbed open space areas.

Ownership: Land ownership within the proposed Joshua Tree Woodland SEA consists of both public and private holdings. The only public ownership is the California Aqueduct as it passes through the southwestern portion of the SEA. The remaining land within the SEA is privately owned. Adjacent land ownership includes the State owned Antelope Valley California Poppy Reserve.

Vegetation: Plant communities within the proposed SEA include: desert scrub, non-native grassland, joshua tree woodland, juniper woodland, and disturbed.

Wildlife: Wildlife populations within the proposed SEA reflect low diversity and abundance for the habitat types present due to the small size of the SEA, the homogeneity of the topography and habitat, and influences of edge effect from surrounding agricultural lands uses.

Wildlife Movement: Wildlife movement within the proposed Joshua Tree Woodland SEA is limited to local movement. Animals foraging within the SEA are unlikely to occur in concentrated areas due to the homogeneity of the topography of the SEA. However, local movement to and from the component parts of the SEA as well as to and from the San Gabriel Mountains and the Tehachapi Mountains undoubtedly occurs.

Sensitive Biological Resources: The proposed SEA includes large patches of joshua tree woodland, a sensitive plant community. The SEA also includes a small number of potentially occurring sensitive plant and animal species such as: sagebrush loeflingia, burrowing owl, loggerhead shrike, Mohave ground squirrel, southern grasshopper mouse, and a few others.

Regional Biological Value: The proposed SEA meets several designation criteria and supports several regional biological values (see Criteria Analysis table at the end of this summary). These values include: joshua tree woodland habitat, which was formerly more extensive, has now become rare both in Los Angeles County and in the region; the joshua tree woodland within the SEA is rare and of a high quality and is important to science as such; the SEA contains the most westerly extent of this habitat type; and the joshua tree woodland contained within the proposed SEA represents an excellent example of this community type.

Recommended Management Practices: Proposed new development within the Joshua Tree Woodland SEA should be designed to be highly compatible with the continued ecological function of the component biological resources described above. In order to preserve the integrity of the SEA, the proposed comprehensive management practices described in the *Los Angeles County SEA Update Study 2000 Background Report* are recommended. These practices address:

- Core habitat
- Habitat linkages and wildlife corridors
- Fire management
- Public access and recreation
- Infrastructure
- Wetlands, riparian habitats, and streambeds
- Non-riparian/upland woodlands

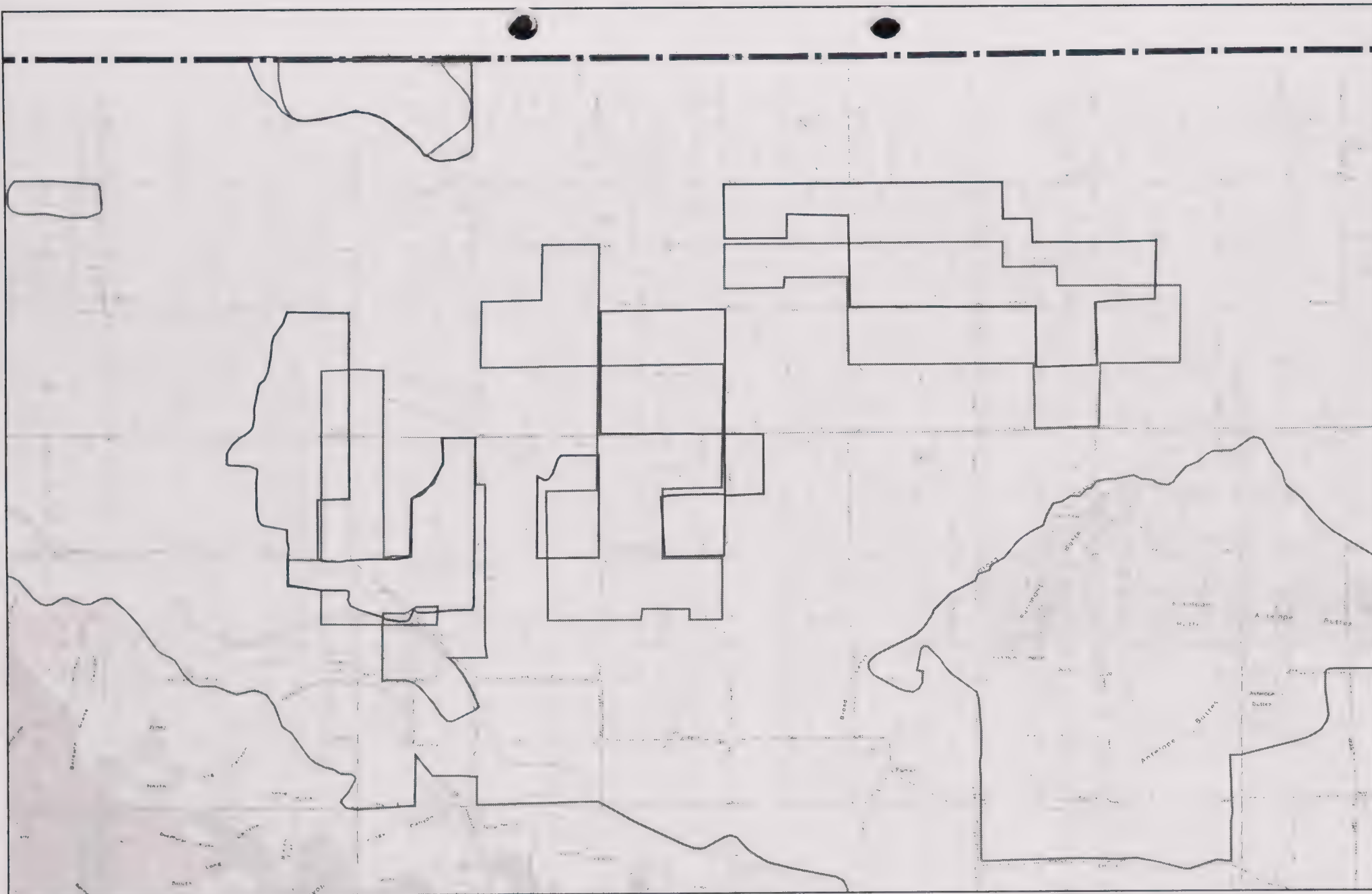
In addition to the comprehensive management practices the following proposed management practices are recommended specifically for the proposed Joshua Tree Woodland SEA:




- Limit development densities to one residential unit per ten acre parcel, and constrain development design, where feasible, to cluster dwelling configuration along existing roadways in order to minimize clearing associated with fuel management, and to reduce the need for grading, fencing, and other habitat disturbances.

- Retain joshua tree woodland, a rare community, with adequate buffers so as to allow for the long term viability and integrity of plant community as a whole.
- Require agricultural activities to employ the best management practices (BMPs) recognized in the industry; avoid unnecessary direct impacts to habitat, and conform to legal standards for all pesticide, herbicide and fertilizer applications.

**CRITERIA ANALYSIS
OF THE PROPOSED JOSHUA TREE WOODLAND SEA**

Criterion	Status	Justification
A) The habitat of core populations of endangered or threatened plant or animal species.	Not met	Although there are several listed species which occur within the SEA, this criterion is not met due to the lack of known core population areas.
B) On a regional basis, biotic communities, vegetative associations, and habitat of plant or animal species that are either unique or are restricted in distribution.	Met	The SEA contains large patches of undisturbed joshua tree woodland habitat which has become increasingly rare in the region.
C) Within Los Angeles County, biotic communities, vegetative associations, and habitat of plant or animal species that are either unique or are restricted in distribution.	Met	As stated above, joshua tree woodlands have become rare in the region, and are even more rare in Los Angeles County.
D) Habitat that at some point in the life cycle of a species or group of species, serves as concentrated breeding, feeding, resting, migrating grounds and is limited in availability either regionally or in Los Angeles County.	Not met	The habitat within the proposed SEA is not known to serve as a concentrated breeding, feeding, resting, or migrating ground for any species.
E) Biotic resources that are of scientific interest because they are either an extreme in physical/geographical limitations, or represent unusual variation in a population or community.	Met	Due to the scarcity of joshua tree woodland, specimens of the quality found in the proposed SEA are important to science and have become living laboratories. The SEA also contains the most westerly extent of this habitat type.
F) Areas that would provide for the preservation of relatively undisturbed examples of the original natural biotic communities in Los Angeles County.	Met	The joshua tree woodland contained within the proposed SEA is an excellent example of this community type.



-  Proposed SEA Boundary
-  Existing SEA Boundary
-  Angeles National Forest

Joshua Tree Woodland Significant Ecological Area Existing and Proposed Boundaries

0 5600
Feet

FORMA Systems
09/06/00

DIVIDER PAGE

CRUZAN MESA VERNAL POOLS

Location: The proposed Cruzan Mesa Vernal Pools Significant Ecological Area (SEA) lies in the southeastern end of the Liebre Mountains, north of the Santa Clara River, and southeast of Bouquet Canyon. The proposed SEA boundaries encompass the watershed and drainages of the Cruzan Mesa and Plum Canyon vernal pools, considered as a single ecosystem within the SEA.

Description: The proposed Cruzan Mesa Vernal Pools SEA covers 958 acres. The orientation and extent of the proposed SEA encompasses the watershed supporting regionally unique vernal pools. Plum Canyon forms the major drainage running east-west through the southern portion of the SEA and drains westerly into Bouquet Canyon. Much of the SEA is comprised of slopes and canyons supporting coastal sage scrub or chaparral vegetation. The Cruzan Mesa vernal pools lie within an elevated, closed basin atop an eroded foothill between Mint and Bouquet canyons. The Plum Canyon vernal pool is a smaller, but biologically important vernal pool situated in a landslide depression on a hillside terrace. All of the proposed 958 acres within the proposed SEA are within unincorporated Los Angeles County jurisdiction.

Existing Land Use: The proposed SEA currently is unoccupied except for remnants of former agricultural and livestock uses. There are three artificially-created stock ponds at the southern end of the Cruzan Mesa basin, and several bunker-style structures set into the surrounding slopes. Several dirt roadways traverse the mesa basin, one of which was bulldozed through the middle of the original pool, creating two separate pools on either side of the roadway berm. The Cruzan Mesa vernal pools and ponds are fenced, and in 1996 the surrounding slopes were brushed and lightly graded. No further land alterations have occurred.

The Plum Canyon vernal pool is hidden from view from the Plum Canyon roadway, and so receives little human attention. Trash dumping, shooting and off-road vehicle activities have occurred within a few meters of the margin of the pool basin, but the pool shows only limited evidence of human intrusion.

Ownership: Land ownership within the proposed SEA consists entirely of private lands within unincorporated areas of Los Angeles County. The SEA lies north of the City of Santa Clarita and west of the unincorporated community of Forest Park, in Mint Canyon.

Vegetation: Plant communities within the proposed SEA include: vernal pool aquatics and emergent species, coastal sage scrub, mainland cherry forest, chaparral, and ruderal non-native

grassland. Dirt roads inside the SEA are bordered by non-native grassland and other ruderal plant species.

Wildlife: Wildlife within much of the proposed SEA is comprised of species typically occurring within coastal sage scrub. Birds of prey frequently forage over the pools and open grasslands which form following the seasonal drying of the surface water. The Cruzan Mesa and Plum Canyon vernal pools provide rare surface water habitat for wildlife in an otherwise semi-arid scrub region, and the ponds attract moderate numbers and diversity of migratory waterfowl. The peripheral zones where different formations of coastal sage scrub surround the vernal pools provide important shelter, terrestrial refugia, ecotonal and edge habitat for wildlife.

Wildlife Movement: The proposed SEA serves as an isolated, high resource quality habitat linkage for migratory waterfowl. The vernal pools teem with arthropod and amphibian activity, and so provide essential feeding grounds for long-distance migrants, as well as for resident species of reptiles, birds and mammals. The ponds do not lie within any identified terrestrial movement routes for wildlife, but in themselves serve as important seasonal watering sites for species moving through and across the Plum Canyon divide between Mint and Bouquet canyons.

Sensitive Biological Resources: The proposed SEA is configured to encompass the regionally significant vernal pools and coastal sage scrub watershed which supports them. Sensitive plant communities within the proposed SEA include vernal pool, fresh-water marsh, coastal sage scrub, and in Plum Canyon, mainland cherry forest. The proposed SEA supports a number of sensitive plant and animal species, including the federally and state endangered California Orcutt grass, federally threatened prostrate navarretia, federally endangered Riverside fairy shrimp, western spadefoot toad, and possibly also the federally threatened California gnatcatcher.

Regional Biological Value: The proposed SEA meets several designation criteria and supports several regional biological values (see Criteria Table at the end of this summary). These values include: sensitive plant species unique to seasonal pools on heavy clay soils, several of which are at the northernmost point in their overall ranges; seasonal surface water, providing breeding sites for sensitive amphibians, including western spadefoot and Riverside fairy shrimp; vernal pools, found nowhere else in Los Angeles County, and their coastal sage scrub watershed serving as a hydrological filter; seasonal ponds and surrounding mesic vegetation provide essential foraging and wintering sites for migrating birds otherwise uncommon in the southern Liebre Mountains; steep cliffs surrounding the mesa tops and their crevices and cavities provide roosting and nesting sites in the otherwise brush-covered hillsides. These pools are the also the only three or four such pools in this portion of Southern California. The sensitive resources they support are unique locally and regionally, and biologists considered to be among most sensitive habitat types in Southern California.

Recommended Management Practices: Proposed new development within the proposed Cruzan Mesa Vernal Pools SEA should be designed to be highly compatible with the continued ecological function of each of the component biological resources described above. In order to preserve the integrity of the SEA, the proposed comprehensive management practices described in the *Los Angeles County SEA Update Study 2000 Background Report* are recommended. These practices address:

- Core habitat
- Habitat linkages and wildlife corridors
- Fire management
- Public access and recreation
- Infrastructure
- Wetlands, riparian habitats, and streambeds
- Non-riparian/upland woodlands

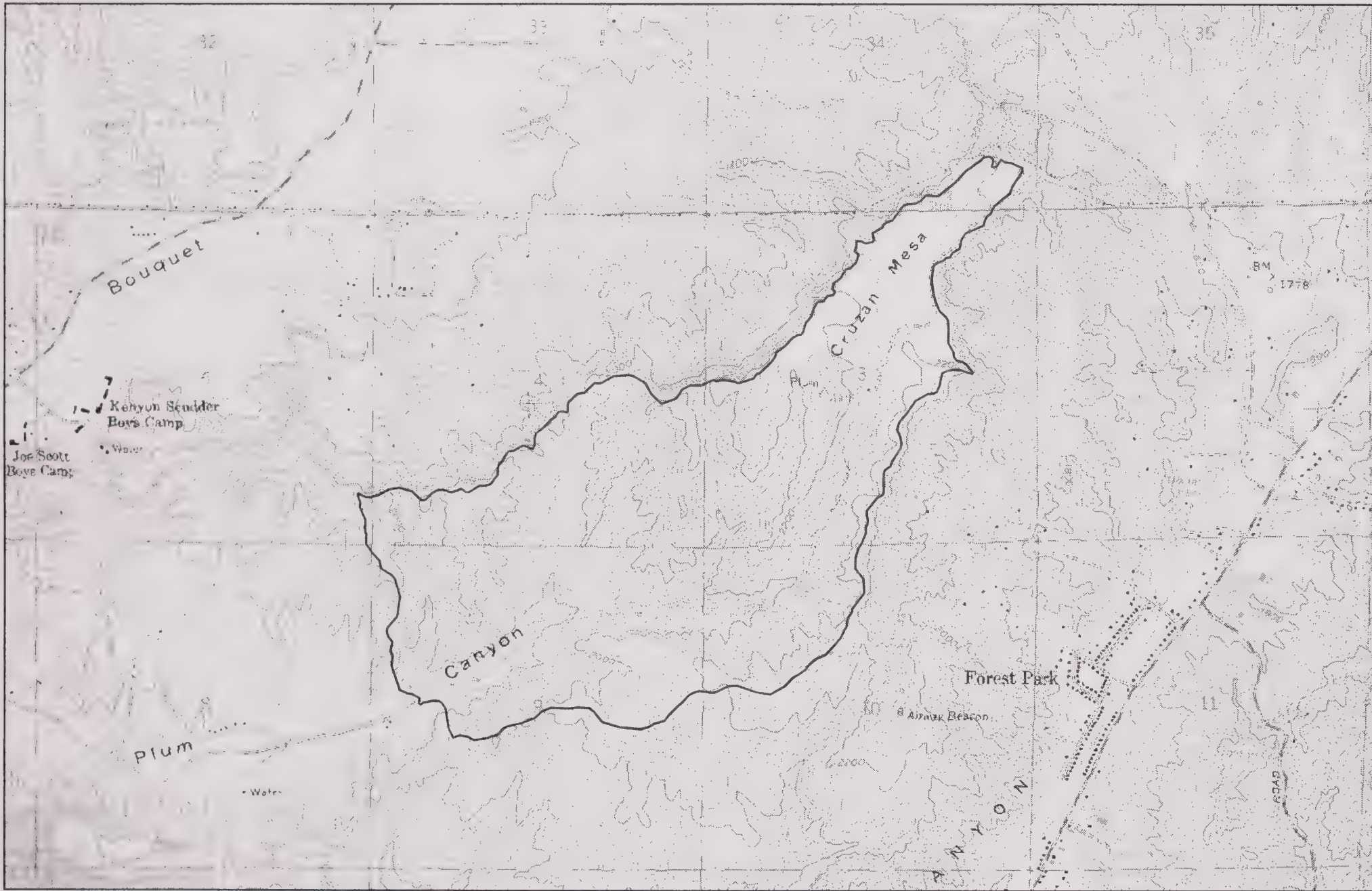
In addition to the comprehensive management practices the following proposed management practices are recommended specifically for the proposed Cruzan Mesa Vernal Pools SEA:

- Prohibit surface altering development within the watersheds or slope connections of the vernal pools. Brushing and other substrate changing actions on the surrounding slopes can cause siltation or direct runoff into the ponds, lowering their biological functionality.
- Limit development to low density and only within the lower (southern) end of the basin, below the central elevation, but strictly limit human intrusion into the vernal pool areas.
- Maintain the habitat of populations of listed species including the federally endangered Riverside fairy shrimp and the federally and state endangered California Orcutt grass as well as adequate buffers to eliminate or minimize adverse impacts.
- Retain rare communities with adequate buffers so as to allow for the long term viability and integrity of plant communities as a whole. Rare communities include: vernal pool, fresh-water marsh, coastal sage scrub, and mainland cherry forest.
- Retain connectivity habitat linkage values of the Cruzan Mesa-Plum Canyon vernal pool ecosystem.

- Restrict human activity in the vernal pool basins or any other actions which might compromise the underlying clay lenses which support the vernal pool hydrology (such as well or piezometer placement); and strictly limit actions which alter surrounding habitat values or disturb slope substrates.
- Transfer of ownership of these pools to a conservation entity would insure proper long-term management of this sensitive regional resource.

**CRITERIA ANALYSIS
OF THE PROPOSED CRUZAN MESA VERNAL POOLS SEA**

Criterion	Status	Justification
A) The habitat of core populations of endangered or threatened plant or animal species.	Met	The only known Los Angeles County populations of the federally endangered Riverside fairy shrimp and the federal and state endangered California Orcutt grass are found in the vernal pools within the SEA.
B) On a regional basis, biotic communities, vegetative associations, and habitat of plant or animal species that are either unique or are restricted in distribution.	Met	The Cruzan Mesa and Plum Canyon vernal pools are regionally unique biotic communities with several plants found only in such habitat types, and support the Riverside fairy shrimp, western spadefoot toad, and at least one vernal pool endemic ground beetle species.
C) Within Los Angeles County, biotic communities, vegetative associations, and habitat of plant or animal species that are either unique or are restricted in distribution.	Met	The Cruzan Mesa and Plum Canyon vernal pools are unique biotic communities within Los Angeles County, with several plants found only in such habitat types, and support the Riverside fairy shrimp, western spadefoot toad, and at least one vernal pool endemic ground beetle species.
D) Habitat that at some point in the life cycle of a species or group of species, serves as concentrated breeding, feeding, resting, or migrating grounds and is limited in availability either regionally or in Los Angeles County.	Met	The vernal pools serve as concentrated breeding areas for several species of amphibians, including the sensitive western spadefoot toad. They also attract a diversity of waterfowl seasonally, mostly species migrating through the area, using the pools for resting and feeding. While other open water systems attract and support waterfowl, the vernal pools are located in remote, upland sites, away from other such freshwater features.
E) Biotic resources that are of scientific interest because they are either an extreme in physical/geographical limitations, or represent unusual variation in a population or community.	Not met	Although the SEA does not contain biotic resource that are clearly an extreme in physical/geographical limitations, or represent unusual variation in a population or community and therefore does not meet this criterion, it is of scientific interest due the extreme rarity of vernal pool communities.
F) Areas that would provide for the preservation of relatively undisturbed examples of the original natural biotic communities in Los Angeles County.	Met	Protection and sensitive management of the Cruzan Mesa and Plum Canyon vernal pools would preserve the only such habitat type in Los Angeles County.



- Proposed SEA Boundary
- Existing SEA Boundary
- Angels National Forest

**Cruzan Mesa Vernal Pools
Significant Ecological Area
Existing and Proposed Boundaries**

0 2100
Feet

FORMA Systems
09/06/00

DIVIDER PAGE

SANTA SUSANA MOUNTAINS/SIMI HILLS

Location: The proposed Santa Susana Mountains/Simi Hills Significant Ecological Area (SEA) is located northwest of the San Fernando Valley within unincorporated areas of Los Angeles County and an incorporated area of the City of Los Angeles west of Chatsworth. The study area is south of State Route 126 (SR-126) and the Santa Clara River, west of the Golden State Freeway (Interstate 5), and includes much of the Santa Susana Mountains in the north, the Santa Susana Pass, Chatsworth Reservoir, and the eastern portion of the Simi Hills in the south. It incorporates existing SEA numbers 13, 14, 20, 21, 63 and 64.

Description: The proposed Santa Susana Mountains/Simi Hills SEA covers approximately 26,795 acres and includes a variety of topographic features including Oat Mountain, the Santa Susana Mountains, the Simi Hills, and many of their associated canyons. Several blue-line streams occur within these canyons as well as many natural springs. The majority of the land is natural open space with very sparse disturbances for ranches, oil wells, and unimproved access roads. The open space within the proposed SEA tends to support chaparral vegetation at the higher elevations and coastal sage scrub at the lower elevations with grasslands occurring in large flat areas. The creeks and canyons support riparian scrub and woodland communities. Chatsworth Reservoir forms a portion of the southeastern boundary. The majority of the 26,795 acres proposed for the Santa Susana Mountains/Simi Hills SEA are within unincorporated Los Angeles County, accounting for approximately 23,425 acres. The remaining 3,370 acres of the SEA are within jurisdiction of the City of Los Angeles.

Existing Land Use: The majority of the land within the SEA is undisturbed open space supporting a diverse array of native vegetation communities. Open space areas within the proposed SEA consists mostly of native vegetation and infrequent minor disturbances such as fire breaks, unimproved dirt access roads, oil wells, tower pads, antennas, parks, and small ranches.

Ownership: The majority of the property within the proposed SEA is privately owned. Publicly owned exceptions include: Chatsworth Reservoir (managed by the Los Angeles Department of Water and Power), Santa Susana Pass State Historical Park, Chatsworth Nature Preserve, Chatsworth Parks North and South, Chatsworth Oaks Park, Roscoe-Valley Circle Park, Bell Canyon Park, El Escorpion Park, Knapp Ranch Park, O'Melveny Park, and Bee Canyon Park

Vegetation: Plant communities within the proposed Santa Susana Mountains/Simi Hills SEA include: chaparral, coastal sage scrub, alluvial scrub, coast live oak woodland, valley oak woodland,

mainland cherry forest, non-native grassland, southern willow scrub, southern cottonwood-willow riparian forest, and disturbed.

Wildlife: Wildlife within the proposed SEA is diverse and abundant due to the large amount of natural open space and the diversity of habitat types. The entire mosaic of vegetation communities within the proposed SEA and adjoining areas constitutes a functional ecosystem for a large variety of common wildlife and plant species; this applies to the SEA and the regional ecosystem.

Wildlife Movement: The proposed Santa Susana Mountains/Simi Hills SEA includes several important linkages for wildlife movement. The Simi Hills and Santa Susana Mountains provide a vast open space corridor to foster wildlife movement between the Santa Monica Mountains to the south, San Gabriel Mountains to the east, and Los Padres National Forest to the north. Dense, natural habitat associated with the majority of the study area provides excellent opportunities for concealment while the grasslands provide an abundance of prey.

Sensitive Biological Resources: Sensitive plant communities within the proposed SEA include coastal sage scrub, alluvial scrub, valley oak woodland, valley oak savannah, mainland cherry woodland, native grassland, southern willow scrub, and cottonwood-willow riparian forest. Many sensitive plants and animals occur or potentially occur within the proposed SEA including Lyons pentachaeta, Nevin's Barberry, Braunton's milkvetch, Santa Susana tarplant, two-striped garter snake, golden eagle, San Diego black-tailed jackrabbit, and the San Diego desert woodrat.

Regional Biological Value: The proposed SEA meets several designation criteria and supports many regional biological values (see Criteria Table at the end of this summary). These values include: plant communities and habitats restricted in distribution on a regional basis as well as within Los Angeles County such as coastal sage scrub, alluvial scrub, coast live oak woodland, valley oak woodland, mainland cherry woodland, native grassland, southern willow scrub, and cottonwood-willow riparian forest; the open space of the proposed SEA which allows for connectivity between the Santa Monica Mountains and the San Gabriel Mountains, an important corridor for gene flow and species movement; and relatively undisturbed native, natural communities within Los Angeles County.

Recommended Management Practices: Proposed new development within the proposed Santa Susana Mountains/Simi Hills SEA should be designed to be highly compatible with the continued ecological function of each of the significant biological resources described above. In order to preserve the integrity of the SEA, the proposed comprehensive management practices described in the *Los Angeles County SEA Update Study 2000 Background Report* are recommended. These practices address:

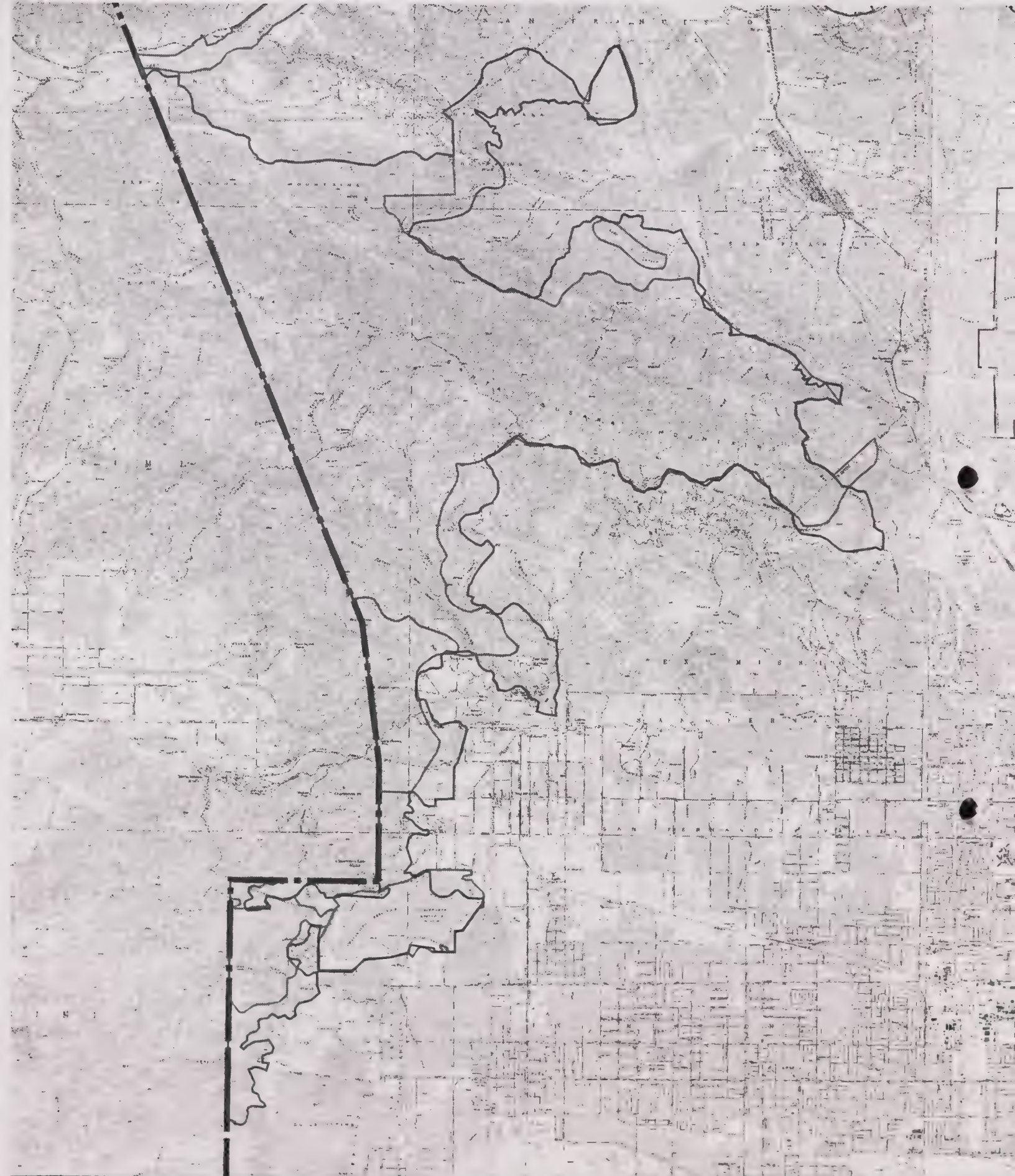
- Core habitat
- Habitat linkages and wildlife corridors
- Fire management
- Public access and recreation
- Infrastructure
- Wetlands, riparian habitats, and streambeds
- Non-riparian/upland woodlands




In addition to the comprehensive management practices the following proposed management practices are recommended specifically for the proposed Santa Susana Mountains/Simi Hills SEA:

- Limit development densities to one residential unit per ten acre parcel, and constrain development design, where feasible, to cluster dwelling configuration along existing roadways in order to minimize clearing associated with fuel management, and to reduce the need for grading, fencing, and other habitat disturbances.
- Maintain the habitat of core populations of listed species including the federally endangered Braunter's milkvetch and rare plants such as Santa Susana tarplant.
- Retain rare communities with adequate buffers so as to allow for the long term viability and integrity of plant communities as a whole. Rare communities include: coastal sage scrub, alluvial scrub, valley oak woodland, valley oak savannah, mainland cherry woodland, native grassland, southern willow scrub, and cottonwood-willow riparian forest.
- Retain connectivity and habitat linkage values throughout the SEA but especially between the Santa Susana Mountains and the Simi Hills, between the Los Angeles County portion of the Simi Hills and the Ventura County portion, between the Santa Susana Mountains and the San Gabriel Mountains, between the Santa Susana Mountains and the Santa Clara River, and between large canyons of the SEA.
- Require oil extraction activities to employ the best management practices recognized in the industry; avoid unnecessary direct impacts to habitat, and conform to legal standards for all procedures used.

**CRITERIA ANALYSIS
OF THE PROPOSED SANTA SUSANA MOUNTAINS/SIMI HILLS SEA**

Criterion	Status	Justification
A) The habitat of core populations of endangered or threatened plant or animal species.	Not met	Although the proposed SEA does contain rare plant populations, it does not contain habitat of known core populations of listed species and therefore, does not meet this criterion.
B) On a regional basis, biotic communities, vegetative associations, and habitat of plant or animal species that are either unique or are restricted in distribution.	Met	The proposed SEA contains habitat of the extremely rare Santa Susan tarplant. In addition, several plant communities within the proposed SEA are CDFG highest inventory priority communities due to their restricted distribution in the Southern California region. These communities include: coastal sage scrub, alluvial scrub, valley oak woodland, valley oak savannah, mainland cherry woodland, native grassland, southern willow scrub, and cottonwood-willow riparian forest.
C) Within Los Angeles County, biotic communities, vegetative associations, and habitat of plant or animal species that are either unique or are restricted in distribution.	Met	All of the plant communities and habitats mentioned above as being restricted in distribution on a regional basis are further restricted in distribution within Los Angeles County.
D) Habitat that at some point in the life cycle of a species or group of species, serves as concentrated breeding, feeding, resting, or migrating grounds and is limited in availability either regionally or in Los Angeles County.	Met	The open space of the proposed SEA allows for connectivity between the Santa Monica Mountains and the San Gabriel Mountains. Due to the development within the vicinity, this is an important corridor for gene flow and species movement.
E) Biotic resources that are of scientific interest because they are either an extreme in physical/geographical limitations, or represent unusual variation in a population or community.	Not met	The proposed SEA does not contain biotic resource that are clearly an extreme in physical/geographical limitations, or represent unusual variation in a population or community and therefore does not meet this criterion.
F) Areas that would provide for the preservation of relatively undisturbed examples of the original natural biotic communities in Los Angeles County.	Met	The relatively undisturbed nature and large size of the plant communities within the Santa Susana Mountains and Simi Hills provides many undisturbed examples of native, natural communities within Los Angeles County.



-  Proposed SEA Boundary
-  Existing SEA Boundary
-  Angeles National Forest

**Santa Susana Mountains/Simi Hills
Significant Ecological Area
Existing and Proposed Boundaries**

0 9400

FORMA System
10/24/0

DIVIDER PAGE

SANTA MONICA MOUNTAINS

Location: The proposed Santa Monica Mountains Significant Ecological Area (SEA) is located within the Santa Monica Mountains. Most of this area is situated within the jurisdiction of unincorporated Los Angeles County. The proposed SEA includes nearly all of the canyons and ridges from the Ventura/Los Angeles County line east to Sullivan Canyon and from the edge of development along the coastline to the edge of development or the Ventura/Los Angeles County line to the north. It includes all or most of existing SEA numbers 3, 3a, 3b, 4, 5, 5b, 6, 7, 8, 9, 10, 11, 12, and 39.

Description: The proposed Santa Monica Mountains SEA covers approximately 99,431 acres and includes most of the Santa Monica Mountains Range. This east-west trending range is geologically complex and characterized by steep, rugged terrain of mountain slopes and canyons, with elevations in the SEA ranging from sea level to over 2,800 feet above mean sea level on Castro Peak. The Santa Monica Mountains are bounded by the Pacific Ocean to the south, the Oxnard Plain to the west, the Los Angeles Basin to the east, and the San Fernando Valley and Simi Hills on the north. The majority of land within the proposed 99,431-acre SEA lies within unincorporated Los Angeles County and accounts for approximately 70,880 acres. Other jurisdictions include approximately 5,974 acres within the City of Malibu, 14,832 acres within the City of Los Angeles, 4,625 acres within the City of Calabasas, 1,567 acres within the City of Agoura Hills, 31 acres within the City of Hidden Hills, and 1,522 acres within the City of Westlake Village.

Existing Land Use: The proposed Santa Monica Mountains SEA currently supports a variety of land uses. The greater majority of the area is undisturbed open space supporting native vegetation. Much of this open space is parkland within the lands of the Santa Monica Mountains National Recreation Area which are distributed throughout the SEA. Other uses include low, moderate, and high density residential, rural residential development, and commercial uses and services.

Ownership: Land ownership within the proposed Santa Monica Mountains SEA consists of a relatively even distribution of public and private holdings. Publicly owned lands are extensive within the SEA and are mostly part of the Santa Monica Mountains National Recreation Area managed by the National Park Service; a few large parcels are owned by the State. The remaining land within the proposed SEA is privately held and predominantly located within unincorporated Los Angeles County.

Vegetation: Plant communities within the proposed SEA include: chaparral, redshank chaparral, coastal sage scrub, non-native grassland, native grassland, coast live oak woodland, valley oak woodland, walnut woodland, southern willow scrub, cottonwood-willow riparian forest, sycamore-alder riparian woodland, oak riparian forest, freshwater marsh, salt marsh, and disturbed communities.

Wildlife: Wildlife within the proposed SEA is generally diverse and abundant due to the large acreage of natural open space and the diversity of habitat types. The entire mosaic of vegetation communities within the proposed SEA and adjoining areas constitutes a functional ecosystem for wildlife species, within the SEA and as part of the regional ecosystem.

Wildlife Movement: Due to its large size, many corridors and linkages are certain to occur within the proposed Santa Monica Mountains SEA, particularly at various bottlenecks. Malibu Creek State Park is likely the central core habitat area in the Santa Monica Mountains, serving as a connective hub between the Simi Hills to the north and the open space preserves of Topanga State Park to the east and Mugu State Park to the west. Open space linkages between Kanan Road and Calabasas Parkway are of particular importance for continued wildlife movement between the Santa Monica Mountains and the Simi Hills, due to the lack of alternative routes and encroachment of development.

Sensitive Biological Resources: Sensitive plant communities within the proposed SEA include: coastal sage scrub, native grassland, valley oak woodland, walnut woodland, southern willow scrub, southern cottonwood-willow riparian forest, sycamore-alder woodland, oak riparian forest, freshwater marsh, and salt marsh. The SEA includes a large number federally and state listed or otherwise sensitive plant and animal species occurring or potentially occurring within the SEA such as: Braunton's milk-vetch, Lyon's pentachaeta, Santa Monica Mountains dudleya, marcescent dudleya, Southern California steelhead trout, tidewater goby, western yellow-billed cuckoo, bald eagle, and many others.

Regional Biological Value: The proposed SEA meets several designation criteria and supports many regional biological values (see Criteria Analysis table at the end of this summary). Core populations of Braunton's milk-vetch, Lyon's pentachaeta, Santa Monica Mountains dudleya, marcescent dudleya, tidewater goby, and Southern California steelhead trout are all present within the SEA. Many areas contain a rich and diverse or unique flora composition such as Upper La Sierra Canyon, Malibu Lagoon, and Malibu Canyon. The SEA also contains areas important to migrating birds including the Malibu Lagoon and the upstream riparian woodland, Tuna Canyon, and Pena Canyon. Other valuable resources include pristine examples of several habitat types and areas of importance to science such as Zuma Canyon, Cold Creek, Tuna Canyon, Pena Canyon, Palo

Comado Canyon, Chesebro Canyon, Temescal Canyon, Rustic Canyon, Sullivan Canyon, and slopes surrounding Encino reservoir.

Recommended Management Practices: Proposed new development within the proposed Santa Monica Mountains SEA should be designed to be highly compatible with the continued ecological function of each of the component biological resources described above. In order to preserve the integrity of the SEA, the proposed comprehensive management practices described in the *Los Angeles County SEA Update Study 2000 Background Report* are recommended. These practices address:

- Core habitat
- Habitat linkages and wildlife corridors
- Fire management
- Public access and recreation
- Infrastructure
- Wetlands, riparian habitats, and streambeds
- Non-riparian/upland woodlands

In addition to the comprehensive management practices the following proposed management practices are recommended specifically for the proposed Santa Monica Mountains SEA:

- Limit development densities to one residential unit per ten acre parcel, and constrain development design, where feasible, to cluster dwelling configuration along existing roadways in order to minimize clearing associated with fuel management, and to reduce the need for grading, fencing, and other habitat disturbances.
- Maintain the habitat of core populations of listed species including the federally endangered Braunton's milk-vetch, Lyon's pentachaeta, Southern California steelhead and tidewater goby, and federally threatened Santa Monica Mountains dudleya, and marcescent dudleya as well as adequate buffers to eliminate or minimize adverse impacts.
- Retain rare communities with adequate buffers so as to allow for the long term viability and integrity of plant communities as a whole. Rare communities include: coastal sage scrub, native grassland, valley oak woodland, walnut woodland, southern willow scrub, southern cottonwood-willow riparian forest, sycamore-alder woodland, oak riparian forest, fresh-water marsh, and salt marsh.

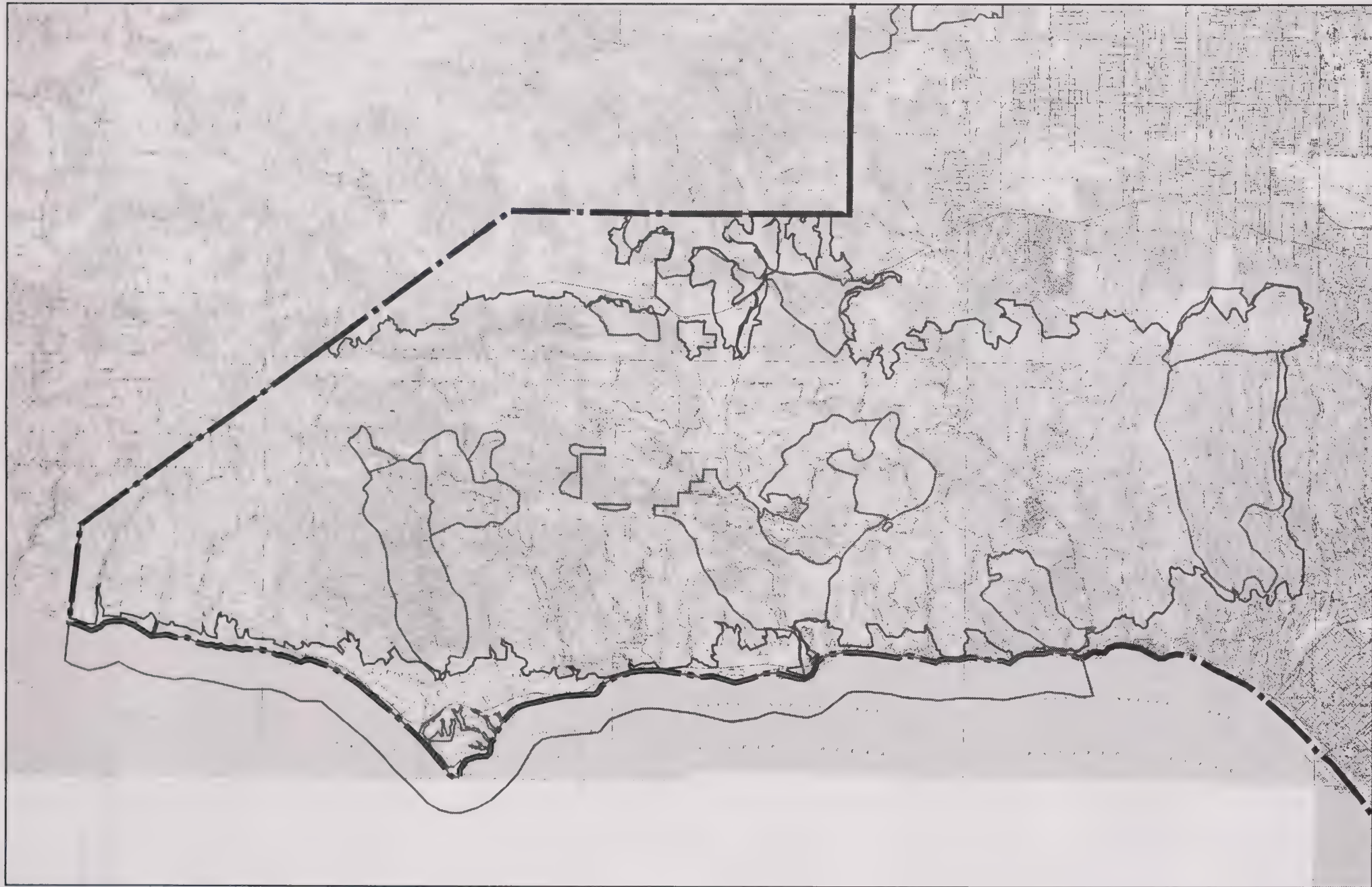
- Maintain distribution extremes and unique populations of species including the California juniper, linear leaved goldenbush, *Calochortus venustus*, valley oak, island mountain-mahogany, lyre snake, mountain quail, hirsute rain-beetle, and the Jerusalem cricket with the goal of retaining the long term viability and integrity of the plant communities in which they persist.
- Retain connectivity and linkage values between the Santa Monica Mountains and the Simi Hills especially along Highway 101 between Kanan Road and Calabasas Parkway. Also maintain linkages between large canyons of the SEA, and between the mouths of canyons and the coastline.

**CRITERIA ANALYSIS
OF THE PROPOSED SANTA MONICA MOUNTAINS SEA**

Criterion	Status	Justification
A) The habitat of core populations of endangered or threatened plant or animal species.	Met	The proposed SEA includes: core habitat of the federally endangered Braunton's milk-vetch, Lyon's pentachaeta, Southern California steelhead, and tidewater goby and federally threatened Santa Monica Mountains dudleya and marcescent dudleya.
B) On a regional basis, biotic communities, vegetative associations, and habitat of plant or animal species that are either unique or are restricted in distribution.	Met	Upper La Sierra Canyon contains an unusually rich and diverse stand of canyon flora including marcescent dudleya, creek dogwood, and many unusually large specimens of other rare plant species; Malibu Lagoon is the only natural lagoon between Point Mugu in Ventura County and Anaheim Bay in Orange County; Malibu Canyon contains a unique mix of floral species uncommon in the region such as black cottonwood and leather leaf ash as well as a regionally unique mixture of inland and coastal species; regionally rare volcanic rock formations create unique communities where they occur.
C) Within Los Angeles County, biotic communities, vegetative associations, and habitat of plant or animal species that are either unique or are restricted in distribution.	Met	Malibu Lagoon is the only natural lagoon in Los Angeles County; upper La Sierra Canyon contains an unusually rich and diverse stand of canyon flora including marcescent dudleya, creek dogwood, and many unusually large specimens of other rare plant species; and Malibu Canyon contains a regionally unique mix of floral species uncommon in the County such as black cottonwood and leather leaf ash, as well as a unique mix of inland and coastal species.
D) Habitat that at some point in the life cycle of a species or group of species, serves as concentrated breeding, feeding, resting, or migrating grounds and is limited in availability either regionally or in Los Angeles County.	Met	The Malibu Lagoon and the upstream riparian woodland in Malibu Creek is an important migrating bird refuge with over 200 species recorded. Tuna and Pena Canyons are an important area to migratory birds due to their combined qualities of healthy vegetation, riparian woodland, surface moisture, undeveloped land, and an unobstructed opening to the coast. The SEA also contains habitat linkages between large open space areas within the SEA as well between areas outside the SEA, such as the Simi Hills and the western extent of the Santa Monica Mountains in Ventura County, which are crucial in maintaining regional plant and animal population health and viability.
E) Biotic resources that are of scientific interest because they are either an extreme in physical/geographical limitations, or represent unusual variation in a population or community.	Met	The proposed SEA includes: a myriad of unique and pristine natural areas important for nature study and scientific research; the range extremes of many species such as the California juniper, linear leaved goldenbush, <i>Calochortus venustus</i> , and valley oak; and disjunct and unique populations of island mountain-mahogany, lyre snake, mountain quail, hirsute rain-beetle, and the Jerusalem cricket.
F) Areas that would provide for the preservation of relatively undisturbed examples of the original natural biotic communities in Los Angeles County.	Met	Zuma Canyon is one of the last major drainages in the Santa Monica Mountains with a year-round stream that supports a rich riparian community, it remains in an undeveloped state; Cold Creek includes an excellent example of an undisturbed natural sandstone basin with springs and a perennial stream; Tuna and Pena Canyons are the last drainages in the central and eastern Santa Monica Mountains that have

CRITERIA ANALYSIS
OF THE PROPOSED SANTA MONICA MOUNTAINS SEA
(CONTINUED)

Criterion	Status	Justification
		not sustained development either in the watershed, or between the canyon mouth and the coast; Palo Comado and Chesebro Canyons support one of the last examples of an oak woodland savannah of any significant size in Los Angeles County; Temescal, Rustic, and Sullivan Canyons represent contiguous, self-contained watersheds that are large enough to support representative samples of native flora and fauna; the area surrounding Encino Reservoir supports the best undisturbed stand of an inland chaparral, coastal sage scrub, and streamside vegetation remaining on the inland slope of the Santa Monica Mountains.



- Proposed SEA Boundary
- Existing SEA Boundary
- Angeles National Forest

**Santa Monica Mountains
Significant Ecological Area
Existing and Proposed Boundaries**

0 14200
Feet

FORMA Systems
09/06/00

DIVIDER PAGE

SAN GABRIEL CANYON

Location: The San Gabriel Canyon Significant Ecological Area (SEA), as proposed, is located along the cismontane foothills of the eastern San Gabriel Mountains and is centered on the mouths of three major canyons which flow from the mountains and interconnecting terrain in between including: San Gabriel, Sawpit, and Santa Anita Canyons. It incorporates existing SEA numbers 22, 45, and 62.

Description: The proposed San Gabriel Canyon SEA encompasses a total of 22,966 acres. The topography of the SEA, including steep-walled canyons, narrow ridgelines, and a wide range of elevation, topography, slope aspect, and geology represent a wide array of physical habitats within this SEA. Consequently, a number of plant communities exist, including grasslands, riparian, shrublands, woodlands, and forests. The majority of the 22,966 acres proposed for the San Gabriel Canyon SEA are within Angeles National Forest, accounting for approximately 14,658 acres. Other jurisdictions within the SEA include: 128 acres within unincorporated Los Angeles County ; 75 acres within the City of Arcadia; 1,110 acres within the City of Azusa; 1,952 acres within the City of Duarte; 249 acres within the City of Glendora; and 4,795 acres within the City of Monrovia.

Existing Land Use: Land uses in this SEA are predominantly low intensity recreation and open space within public lands. The overwhelming majority of this SEA is within the Angeles National Forest which is oriented toward recreational use. For the most part, unimproved roads, trails, campgrounds, and scattered cabins represent the most intense uses of the forest. Private land-holdings which comprise a very small portion of the SEA exist in open space as well.

Ownership: The majority of the land within the SEA is owned by the U.S. Government and is managed by the Forest Service, Angeles National Forest. A much smaller area is owned by Los Angeles County and the cities of Monrovia, and Arcadia, each of which manages a wilderness park in the SEA. The County also operates and maintains limited areas for flood control. The remainder of the SEA (a relatively small portion) is under private ownership in parcels of varying sizes.

Vegetation: The variety of topography, soil types, slope aspects and water availability within this SEA creates a range of physical habitats which support numerous plant species. Nine major plant communities are found within the San Gabriel Canyon SEA including bigcone spruce-canyon oak forest, white alder riparian forest, alluvial fan scrub, oak woodland, oak riparian forest, walnut woodland, southern willow scrub, chaparral, coastal sage scrub, and non-native grassland.

Wildlife: Wildlife populations within the proposed San Gabriel Canyon SEA are diverse and abundant due to the region's physiographic diversity, its relative isolation, and its location within and adjacent to the Angeles National Forest. Bird and mammal use, diversity, and abundance within this SEA is expected to be high.

Wildlife Movement: Wildlife movement within the San Gabriel Canyon SEA takes on two major forms: throughout the many sizeable drainages course through this SEA to connect the forest interior with foothill areas; and, across the flanks of the foothills and lower mountains, in an east-west direction. Particularly for riparian-favoring migratory birds, a corridor linking lower elevational riparian habitats in the San Gabriel Canyon SEA is of high use and importance.

Sensitive Biological Resources: The San Gabriel Canyon SEA contains habitats, or plant communities, that are generally considered unique, of relatively limited distribution, or are of particularly high value to wildlife. These are oak woodland, walnut woodland, oak riparian woodland, southern willow scrub, coastal sage scrub, and alluvial fan scrub. A number of sensitive plant and wildlife species exist or potentially occur within the SEA. These species are considered sensitive due to declining, limited, or threatened populations, resulting in most cases from habitat reductions.

Regional Biological Value: The proposed SEA meets several designation criteria and supports many regional biological values (see Criteria Table at the end of this summary). The SEA contains core populations of San Gabriel bedstraw and San Gabriel Mountains dudleya. Several plant communities within this SEA are restricted in distribution in the Southern California region and Los Angeles County including: oak woodland, walnut woodland, oak riparian woodland, southern willow scrub, coastal sage scrub, and alluvial fan scrub. The SEA supports well developed and diverse riparian woodlands, as well as year-round sources of water. These areas represent important stopover and overwintering sites for a wide variety of migratory birds, as well as essential habitat for resident species. This SEA also facilitates movement for wide-ranging mammals which must move over large areas to fulfill their habitat requirements. Virtually all of the native biotic communities within this SEA are relatively undisturbed.

Recommended Management Practices: Proposed new development within the proposed San Gabriel Canyon SEA should be designed to be highly compatible with the continued ecological function of each of the component biological resources described above. Although a comprehensive evaluation of all possible future land uses within this SEA cannot be made here, a general approach is outlined below and is recommended for use on a project specific basis. In order to preserve the integrity of the SEA, the proposed comprehensive management practices described in the *Background Report* are recommended. These practices address:

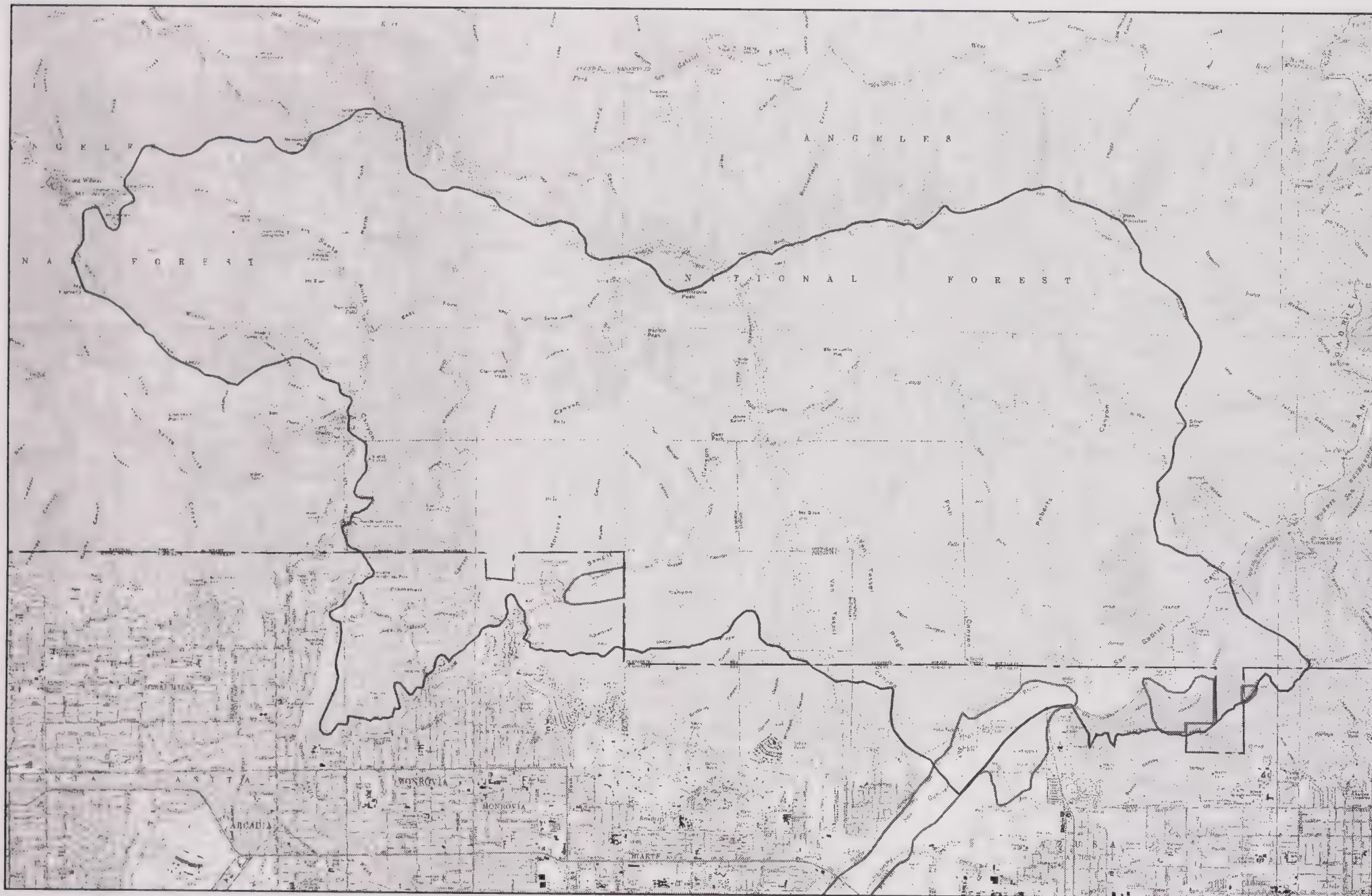
- Core habitat
- Habitat linkages and wildlife corridors
- Fire management
- Public access and recreation
- Infrastructure
- Wetlands, riparian habitats, and streambeds
- Non-riparian/upland woodlands

In addition to the comprehensive management practices the following proposed management practices are recommended specifically for the proposed San Gabriel Canyon SEA:

- Maintain the habitat of core populations of extremely rare species including San Gabriel bedstraw and San Gabriel Mountains dudleya.
- Retain rare communities with adequate buffers so as to allow for the long term viability and integrity of plant communities as a whole. Rare communities include: oak woodland, walnut woodland, oak riparian woodland, southern willow scrub, coastal sage scrub, and alluvial fan scrub.

**CRITERIA ANALYSIS
OF THE PROPOSED SAN GABRIEL CANYON SEA**

Criterion	Status	Justification
A) The habitat of core populations of endangered or threatened plant or animal species.	Not met	Although the proposed SEA contains rare plant populations, it does not contain a core population of a listed species and therefore does not meet this criterion.
B) On a regional basis, biotic communities, vegetative associations, and habitat of plant or animal species that are either unique or are restricted in distribution.	Met	The proposed SEA contains habitat of the extremely rare San Gabriel bedstraw and the San Gabriel Mountains dudleya. In addition, several plant communities within this SEA are CDFG highest inventory priority communities due to their restricted distribution in the Southern California region. These communities include: walnut woodland, oak riparian woodland, southern willow scrub, coastal sage scrub, and alluvial fan scrub.
C) Within Los Angeles County, biotic communities, vegetative associations, and habitat of plant or animal species that are either unique or are restricted in distribution.	Met	All of the plant communities and habitats mentioned above as being restricted in distribution on a regional basis are also restricted in distribution within Los Angeles County.
D) Habitat that at some point in the life cycle of a species or group of species, serves as concentrated breeding, feeding, resting, or migrating grounds and is limited in availability either regionally or in Los Angeles County.	Met	The three major canyons within this SEA support well developed and diverse riparian woodlands, as well as year-round water sources. These represent important stopover and overwintering areas for a wide variety of migratory birds, as well as essential habitat for resident species. These canyons also support seasonal and more frequent movement for wide-ranging mammals which must move over large areas to fulfill their habitat requirements.
E) Biotic resources that are of scientific interest because they are either an extreme in physical/geographical limitations, or represent unusual variation in a population or community.	Not met	The proposed SEA does not contain biotic resources that are clearly an extreme in physical/geographical limitations, or represent unusual variation in a population or community and therefore does not meet this criterion.
F) Areas that would provide for the preservation of relatively undisturbed examples of the original natural biotic communities in Los Angeles County.	Met	Virtually all of the native biotic communities within this SEA are relatively undisturbed over most of their extent. As such, and because urbanization throughout much of Los Angeles County's foothill regions has removed large expanses of these communities, those in the San Gabriel Canyon SEA are particularly important to the County's natural heritage.



- Proposed SEA Boundary
- Existing SEA Boundary
- Angeles National Forest

San Gabriel Canyon Significant Ecological Area Existing and Proposed Boundaries

0 6200
Feet

FORMA Systems
09/06/00

DIVIDER PAGE

SAN DIMAS CANYON/SAN ANTONIO WASH

Location: The San Dimas Canyon/San Antonio Wash Significant Ecological Area (SEA), as proposed, is located along the cismontane foothills of the eastern San Gabriel Mountains and is centered on the mouths of four major canyons which flow from the mountains and interconnecting terrain including: San Antonio, Live Oak, Marshall, and San Dimas Canyons. It incorporates existing SEA numbers 25 and 26.

Description: The proposed San Dimas Canyon/San Antonio Wash SEA is comprised of two component parts encompassing a total of 6,785 acres. The topography of the SEA, including steep-walled canyons, narrow ridgelines, and a wide range of elevation, topography, slope aspect, and geology represent a wide array of physical habitats within this SEA. Consequently, a number of plant communities exist, including grasslands, riparian, shrublands, woodlands, and forests. The 6,785 acres proposed for the San Dimas Canyon/San Antonio Wash SEA are within several jurisdictions including: 2,961 in the Angeles National Forest; 1,568 in unincorporated Los Angeles County; 1,566 within the City of Claremont; 9 within the City of Glendora; 320 within the City of La Verne; and 361 in the City of San Dimas.

Existing Land Use: Land uses in this SEA are predominantly low intensity recreation and open space within public lands. The overwhelming majority of this SEA is within the Angeles National Forest which is oriented toward recreational use. For the most part, unimproved roads, trails, campgrounds, and scattered cabins represent the most intense uses of the forest. Private land-holdings which comprise a very small portion of the SEA exist in open space as well.

Ownership: The majority of the land within the SEA is owned by the U.S. Government and is managed by the Forest Service, Angeles National Forest. A much smaller area is owned by the cities of Claremont and Glendora, each of which manages a wilderness park in the SEA. The County also operates and maintains limited areas for flood control. The remainder of the SEA (a relatively small portion) is under private ownership in parcels of varying sizes.

Vegetation: The variety of topography, soil types, slope aspects and water availability within this SEA creates a range of physical habitats which support numerous plant species. The major plant communities found within the San Dimas Canyon/San Antonio Wash SEA include: bigcone spruce-canyon oak forest, white alder riparian forest, alluvial fan scrub, oak woodland, oak riparian forest, walnut woodland, southern willow scrub, chaparral, coastal sage scrub, and non-native grassland.

Wildlife: Wildlife populations within the proposed San Dimas Canyon/San Antonio Wash SEA are diverse and abundant due to the region's physiographic diversity, its relative isolation, and its location within and adjacent to the Angeles National Forest. Bird and mammal use, diversity, and abundance within this SEA is high.

Wildlife Movement: Wildlife movement within the San Dimas Canyon/San Antonio Wash SEA occurs in two ways. The first is movement throughout the many sizeable drainages which course through the SEA to connect the forest interior with foothill areas. The second way is across the flanks of the foothills and lower mountains in an east-west direction. Particularly for riparian-favoring migratory birds, a corridor linking lower elevation riparian habitats in the San Dimas Canyon/San Antonio Wash SEA is expected to be of high use and importance.

Sensitive Biological Resources: The San Dimas Canyon/San Antonio Wash SEA contains habitats, or plant communities, that are considered unique, of relatively limited distribution, or of particular value to wildlife. These are oak woodland, walnut woodland, oak riparian woodland, southern willow scrub, coastal sage scrub, and alluvial fan scrub. A number of sensitive plant and wildlife species exist or potentially occur within the SEA. These species are considered sensitive due to declining, limited, or threatened populations, resulting in most cases from habitat reductions.

Regional Biological Value: The proposed SEA meets several designation criteria and supports many regional biological values (see Criteria Table at the end of this summary). The SEA contains the core population of the extremely rare rock monardella. Several plant communities within this SEA are restricted in distribution in the Southern California region and Los Angeles County including: oak woodland, walnut woodland, oak riparian woodland, southern willow scrub, coastal sage scrub, and alluvial fan scrub. The SEA supports well developed and diverse riparian woodlands, as well as year-round sources of water. These represent important stopover and overwintering sites for a wide variety of migratory birds, as well as essential habitat for resident species. This SEA also facilitates more frequent movement for wide-ranging mammals which must move over large areas to fulfill their habitat requirements. Virtually all of the native biotic communities within this SEA are relatively undisturbed.

Recommended Management Practices: Proposed new development within the proposed San Dimas Canyon/San Antonio Wash SEA should be designed to be highly compatible with the continued ecological function of each of the component biological resources described above. Although a comprehensive evaluation of all possible future land uses within this SEA cannot be made here, a general approach is outlined below which follows the guidelines and is recommended for use on a project specific basis. In order to preserve the integrity of the SEA, the proposed

comprehensive management practices described in the *Los Angeles County SEA Update Study 2000 Background Report* are recommended. These practices address:

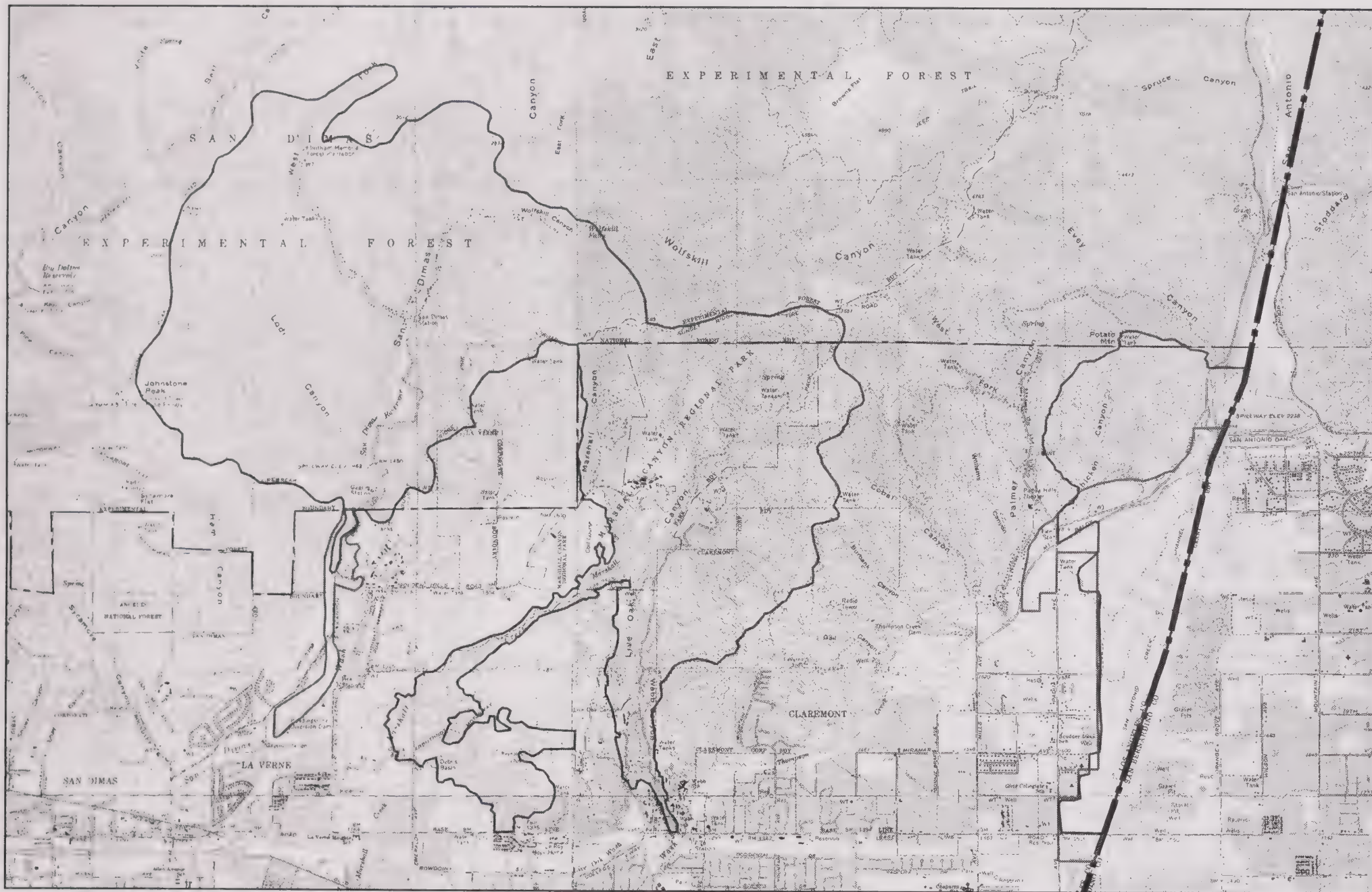
- Core habitat
- Habitat linkages and wildlife corridors
- Fire management
- Public access and recreation
- Infrastructure
- Wetlands, riparian habitats, and streambeds
- Non-riparian/upland woodlands

In addition to the comprehensive management practices the following proposed management practices are recommended specifically for the proposed San Dimas Canyon/San Antonio Wash SEA:

- Maintain the habitat of core populations of extremely rare species including rock monardella.
- Retain rare communities with adequate buffers so as to allow for the long term viability and integrity of plant communities as a whole. Rare communities include: oak woodland, walnut woodland, oak riparian woodland, southern willow scrub, coastal sage scrub, and alluvial fan scrub.

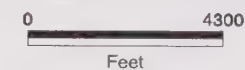
**CRITERIA ANALYSIS
OF THE PROPOSED SAN DIMAS CANYON/SAN ANTONIO WASH SEA**

Criterion	Status	Justification
A) The habitat of core populations of endangered or threatened plant or animal species.	Not met	Although the proposed SEA contains rare plant populations, it does not contain a core population of a listed species and therefore does not meet this criterion.
B) On a regional basis, biotic communities, vegetative associations, and habitat of plant or animal species that are either unique or are restricted in distribution.	Met	The proposed SEA contains habitat of the extremely rare rock monardella. In addition, several plant communities within this SEA are CDFG highest inventory priority communities due to their restricted distribution in the Southern California region, including: walnut woodland, oak riparian woodland, southern willow scrub, coastal sage scrub, and alluvial fan scrub.
C) Within Los Angeles County, biotic communities, vegetative associations, and habitat of plant or animal species that are either unique or are restricted in distribution.	Met	All of the plant communities and habitats mentioned above as being restricted in distribution on a regional basis are also restricted in distribution within Los Angeles County.
D) Habitat that at some point in the life cycle of a species or group of species, serves as concentrated breeding, feeding, resting, or migrating grounds and is limited in availability either regionally or in Los Angeles County.	Met	The major canyons within this SEA support well developed and diverse riparian woodlands, as well as a source of water for most, if not all, of the year. These represent important stopover and overwintering areas for a wide variety of migratory birds, as well as essential habitat for resident species. These canyons also support seasonal and more frequent movement for wide-ranging mammals which must move over large areas to fulfill their habitat requirements.
E) Biotic resources that are of scientific interest because they are either an extreme in physical/geographical limitations, or represent unusual variation in a population or community.	Not met	The proposed SEA does not contain biotic resources that are clearly an extreme in physical/geographical limitations, or represent unusual variation in a population or community and therefore does not meet this criterion.
F) Areas that would provide for the preservation of relatively undisturbed examples of the original natural biotic communities in Los Angeles County.	Met	Virtually all of the native biotic communities within this SEA are relatively undisturbed over most of their extent. As such, and because urbanization throughout much of Los Angeles County's foothill regions has removed large expanses of these communities, those in the San Dimas Canyon/San Antonio Wash SEA are particularly important to the County's natural heritage.



- Proposed SEA Boundary
- Existing SEA Boundary
- Anges National Forest

San Dimas Canyon/San Antonio Wash Significant Ecological Area Existing and Proposed Boundaries



DIVIDER PAGE

EAST SAN GABRIEL VALLEY

Location: The proposed East San Gabriel Valley SEA is located in the easternmost portion of the San Gabriel Valley. The study area represents several ridgelines and hilltops and a major drainage at the eastern end of the San Jose Hills which have been surrounded by urban development over the past four decades. Over most of its boundaries the East San Gabriel Valley SEA is bordered by the edge of developed properties. It also incorporates existing SEA number 16.

Description: The proposed East San Gabriel Valley SEA is comprised of five component parts ranging in size from approximately 320 acres to approximately 1,794 acres. Combined, these components total approximately 5,175 acres. The location and configuration of this SEA and its parts are primarily defined by the urbanization of the eastern San Gabriel Valley which occurred over the more easily developed valley floor and lower slopes of the San Jose Hills. As a consequence of this development the SEA resembles an "archipelago" encompassing portions, or islands, of undeveloped ridgelines, hilltops and drainages, between the San Gabriel Mountains to the north, and the Puente Hills to the south. The proposed SEA overlaps into several different jurisdictions. These include: approximately 722 acres within unincorporated Los Angeles County; 27 acres within the City of Covina; 423 acres within the City of Glendora; 9 acres within the City of La Verne; 471 acres within the City of Pomona; 2,272 acres within the City of San Dimas; 988 acres within the City of Walnut; and 264 acres within the City of West Covina.

Existing Land Use: Land uses within the East San Gabriel Valley SEA vary from grazing to recreational and institutional use. A large portion of the SEA lies within established county and city park areas. The remaining lands share characteristics of natural open space with scattered clearings of unknown origin.

Land Ownership: Public, institutional and private ownerships exist within this SEA. Public ownerships include Los Angeles County (Bonelli and Walnut Creek Parks) and the City of Glendora (South Hills Park). Institutional owners include the Pacific Coast Baptist Bible College and the California State University system. The remainder of the land within the East San Gabriel Valley SEA is comprised of private ownerships; among the largest is Forest Lawn Memorial Park.

Vegetation: The variety of topography, soil types, slope aspects and water availability within this SEA creates a range of physical habitats which support numerous plant species. Eight major plant communities are found within the East San Gabriel Valley SEA including: oak woodland; oak

riparian forest; walnut woodland; southern willow scrub; chaparral; coastal sage scrub; freshwater marsh; and non-native grassland.

Wildlife: Wildlife populations within the proposed East San Gabriel Valley SEA are expected to reflect lower diversity and abundance for the habitat types present due to edge effects of surrounding development and existing recreational uses. However, a surprisingly high diversity of birds are documented to occur within this SEA, including the federally threatened California gnatcatcher.

Wildlife Movement: The proposed East San Gabriel Valley SEA represents a regional wildlife corridor between the San Gabriel Mountains and the Puente Hills/Chino Hills complex. Unlike the commonly held concept of a corridor, this SEA contains a series of discontinuous habitat blocks and patches rather than an unbroken corridor for movement. As such, this SEA facilitates movement and exchange between larger habitat areas by allowing for terrestrial "island-hopping" between and among the individual SEA components. The manner in which this SEA allows wildlife populations in different areas to interact is less than ideal. The extent of this exchange depends upon urbanization.

Sensitive Biological Resources: The East San Gabriel Valley SEA contains habitats, or plant communities, that are generally considered unique, of relatively limited distribution, or of particular value to wildlife. These are oak woodland, oak riparian forest, walnut woodland, southern willow scrub, and coastal sage scrub. Despite the fragmented nature of this SEA and adverse edge effects from surrounding development, a number of sensitive plant and wildlife species have been observed or may occur here. These species are considered sensitive due to declining, limited, or threatened populations, resulting in most cases from habitat reductions.

Regional Biological Value: In a regional context, the value of the proposed East San Gabriel Valley SEA is founded in four of the six criteria used in this study to identify and select SEAs (see Criteria Analysis table at the end of this summary).

Recommended Management Practices: Proposed new development within the proposed East San Gabriel Valley SEA should be designed to be highly compatible with the continued ecological function of each of the component biological resources described above. Although a comprehensive evaluation of all possible future land uses within this SEA cannot be made here, a general approach is outlined below which follows the guidelines and is recommended for use on a project specific basis. In order to preserve the integrity of the SEA, the proposed comprehensive management practices described in the *Los Angeles County SEA Update Study 2000 Background Report* are recommended. These practices address:

- Core habitat
- Habitat linkages and wildlife corridors
- Fire management
- Public access and recreation
- Infrastructure
- Wetlands, riparian habitats, and streambeds
- Non-riparian/upland woodlands

In addition to the comprehensive management practices the following proposed management practices are recommended specifically for the proposed East San Gabriel Valley SEA:

- Limit development densities to one residential unit per ten acre parcel, and constrain development design, where feasible, to cluster dwelling configuration along existing roadways in order to minimize clearing associated with fuel management, and to reduce the need for grading, fencing, and other habitat disturbances.
- Maintain the habitat of core populations of listed species including the federally threatened California gnatcatcher.
- Retain rare communities with adequate buffers so as to allow for the long term viability and integrity of plant communities as a whole. Rare communities include: oak woodland, oak riparian forest, walnut woodland, willow woodland, and coastal sage scrub.
- Retain connectivity and linkage values through this SEA as an island hopping linkage between the San Gabriel Mountains and the Puente Hills. Maintain lines of sight between components at or near their existing borders. To the greatest extent possible, existing distances between the components should be maintained rather than increase through intense uses at their perimeters.

**CRITERIA ANALYSIS
OF THE PROPOSED EAST SAN GABRIEL VALLEY SEA**

Criterion	Status	Justification
A) The habitat of core populations of endangered or threatened plant or animal species.	Met	This SEA contains habitat which supports a core population (and the only known population) of the federally threatened California gnatcatcher, in the eastern San Gabriel Valley. This population has been recently observed in coastal sage scrub at two locations in the area, Bonelli Park and Buzzard Peak. At both locations, surveys over multiple years indicate that this population has been increasing in numbers. Currently, it is believed that there are between ten and fifteen pairs of gnatcatchers in this population.
B) On a regional basis, biotic communities, vegetative associations, and habitat of plant or animal species that are either unique or are restricted in distribution.	Met	Several plant communities within this SEA are CDFG highest inventory priority communities due to their restricted distribution in the Southern California region. These communities include: walnut woodlands which are scattered throughout the components of this SEA; oak riparian woodland which is best expressed within the Walnut Creek drainage; isolated stands of willow woodland along many of the drainages in the Bonelli/Walnut Creek Parks and Buzzard Peak components; freshwater marsh and open water found primarily in association with Puddingstone Reservoir; and coastal sage scrub, which also serves as the habitat for the California gnatcatcher, found in scattered patches over hillsides within the South Hills, Bonelli/Walnut Parks, Via Verde and Buzzard Peak components.
C) Within Los Angeles County, biotic communities, vegetative associations, and habitat of plant or animal species that are either unique or are restricted in distribution.	Met	All of the plant communities and habitats indicated above as restricted in distribution on a regional basis, are also restricted in distribution within Los Angeles County.
D) Habitat that at some point in the life cycle of a species or group of species, serves as concentrated breeding, feeding, resting, or migrating grounds and is limited in availability either regionally or in Los Angeles County.	Met	Any relatively large body of water with pockets of natural lakeside vegetation along its shoreline potentially meets this criteria, particularly within the context of an arid to semiarid environment, characteristic of Los Angeles County. Although subjected to boating activities and shoreline recreational use, Puddingstone Reservoir serves as an important habitat for migrating water fowl and water birds, evident in the high diversity of birds recorded at the park over the past several years.
E) Biotic resources that are of scientific interest because they are either an extreme in physical/geographical limitations, or represent unusual variation in a population or community.	Not met	The SEA does not contain biotic resource that are clearly an extreme in physical/geographical limitations, or represent unusual variation in a population or community and therefore does not meet this criterion.

**CRITERIA ANALYSIS
OF THE PROPOSED EAST SAN GABRIEL VALLEY SEA
(CONTINUED)**

Criterion	Status	Justification
F) Areas that would provide for the preservation of relatively undisturbed examples of the original natural biotic communities in Los Angeles County.	Not met	The proposed SEA does not contain areas that would provide for the preservation of relatively undisturbed examples of the original natural biotic communities in Los Angeles County



- Proposed SEA Boundary
- Existing SEA Boundary
- Angeles National Forest

**East San Gabriel Valley
Significant Ecological Area
Existing and Proposed Boundaries**

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DIVIDER PAGE

PUENTE HILLS

Location: The proposed Puente Hills Significant Ecological Area (SEA) is located in the Puente Hills in southeastern Los Angeles County. The hills are oriented in an east-west manner and extend from the San Gabriel River on the west to the county line on the east, transitioning into the Chino Hills. The proposed Puente Hills boundaries begin in the west in and adjacent to Whittier Narrows Dam County Recreation Area and Flood Control Basin at the confluence of the San Gabriel River and Rio Hondo. Moving east, the SEA begins again along Workman Mill Road at the mouth of Sycamore Canyon. The eastern boundary of this SEA is the Los Angeles/San Bernardino County line. It incorporates existing SEA numbers 15, 17, 42, and 44.

Description: The Puente Hills SEA encompasses the major remaining habitat areas in the Los Angeles County portion of the Puente Hills. These include: Whittier Narrows, Sycamore Canyon and Turnbull Canyon in the west; Powder Canyon in the central portion of the SEA; and, Brea Canyon and Tonner Canyon in the east. Each of these areas contains relatively undisturbed examples of woodland, shrubland, grassland and wetland communities that once existed throughout the inland hills complex of the Los Angeles basin. Interconnecting these habitat areas are linkages of native, naturalized or sparsely developed land. The majority of the 13,421 acres proposed for the SEA lie within unincorporated Los Angeles County jurisdiction accounting for approximately 10,103 acres. Other jurisdictions have also been included within the SEA in order to delineate the boundaries of functioning habitat units. These include: 353 acres within the City of Diamond Bar; 8 acres within the City of Industry; 1,181 acres within the City of La Habra Heights; 63 acres within the City of Montebello; 122 acres within the City of Pico Rivera; 7 acres within the City of South El Monte; and 1,586 acres within the City of Whittier.

Existing Land Use: A variety of land uses ranging in intensity are present within the proposed SEA and represent a wide range of associated impacts on the landscape. Land uses include: relatively low intensity recreational pursuits such as hiking, riding and biking trails; periodic flood control maintenance within the Whittier Narrows Dam Flood Control Basin and associated channels; livestock grazing of varying intensities; oil extraction activities; and rural residential development.

Land Ownership: The majority of this SEA falls under private ownership. Relatively large private owners include Rose Hills Memorial Foundation, Chevron, Shell/Aera Energy LLC, Boy Scouts of America, Puente Hills Landfill Nature Conservancy, and Santa Monica Mountains Conservancy. Significant public ownerships include the Army Corps of Engineers who own, operate and maintain

the Whittier Narrows Dam Recreation Area and Flood Control Basin and the County of Los Angeles who own Schabarum Regional Park.

Vegetation: Eight major plant communities are found within the Puente Hills SEA including: oak woodland; oak riparian forest; walnut woodland; southern willow scrub; chaparral; coastal sage scrub; freshwater marsh; and non-native grassland.

Wildlife: Wildlife within the proposed Puente Hills SEA has frequently been documented to be very diverse and abundant due to the large acreage of natural open space, the diversity of habitat types, and regional connectivity.

Wildlife Movement: This SEA represents the Los Angeles County portion of a continuous series of natural open space within the Puente Hills and Chino Hills. Overall, this open space extends west from State Route 91 (SR-91) in Orange and Riverside Counties to the Whittier Narrows reach of the San Gabriel River which physically link the Puente/Chino Hills with the Santa Ana Mountains and the San Gabriel Mountains, respectively.

Sensitive Biological Resources: The proposed Puente Hills SEA supports several habitat types considered sensitive by resource agencies, due to scarcity of vegetation and provision of habitat for a number of state and federally listed endangered, threatened, and rare vascular plants, and several sensitive bird and reptile species. These communities include oak riparian woodland, walnut woodland, southern willow scrub, coastal sage scrub and freshwater marsh which occur throughout the study area.

Regional Biological Value: The proposed SEA meets several designation criteria and supports many regional biological values (see Criteria Analysis table at the end of this summary).

Recommended Management Practices: Proposed new development within the proposed Puente Hills SEA should be designed to be highly compatible with the continued ecological function of the component biological resources described above; retention of existing natural biotic resources should be ensured. Although a comprehensive evaluation of all possible future land uses within this SEA cannot be made here, a general approach is outlined below which follows the guidelines and is recommended for use on a project specific basis. In order to preserve the integrity of the SEA, the proposed comprehensive management practices described in the *Los Angeles County SEA Update Study 2000 Background Report* are recommended. These practices address:

- Core habitat

- Habitat linkages and wildlife corridors
- Fire management
- Public access and recreation
- Infrastructure
- Wetlands, riparian habitats, and streambeds
- Non-riparian/upland woodlands

In addition to the comprehensive management practices the following proposed management practices are recommended specifically for the proposed Puente Hills SEA:

- Limit development densities to one residential unit per ten acre parcel, and constrain development design, where feasible, to cluster dwelling configuration along existing roadways in order to minimize clearing associated with fuel management, and to reduce the need for grading, fencing, and other habitat disturbances.
- Retain rare communities with adequate buffers so as to allow for the long term viability and integrity of plant communities as a whole. Rare communities include: oak riparian woodland, walnut woodland, southern willow scrub, coastal sage scrub and freshwater marsh.
- Retain connectivity and linkage values between major canyons of the SEA and especially at choke points such as between the Chino Hills and the Puente Hills, and major road crossings.
- Require oil extraction activities to employ the best management practices recognized in the industry; avoid unnecessary direct impacts to habitat, and conform to legal standards for all procedures used.
- Require mitigation through restoration and revegetation where the loss of small and/or isolated habitat patches is proposed. This would prevent a cumulative net loss in the functions and values of these habitats within any one of the Puente Hills SEA habitat units.

**CRITERIA ANALYSIS
OF THE PROPOSED PUENTE HILLS SEA**

Criterion	Status	Justification
A) The habitat of core populations of endangered or threatened plant or animal species.	Not met	Although the proposed SEA does support populations of listed species, they are not known to be core populations, therefore, this criterion is not met.
B) On a regional basis, biotic communities, vegetative associations, and habitat of plant or animal species that are either unique or are restricted in distribution.	Met	Several plant communities within this SEA are CDFG highest inventory priority communities due to their restricted distribution in the Southern California region. These communities include: walnut woodland which are scattered throughout this SEA; oak riparian woodland which is best developed in the major drainages of Sycamore Canyon, Turnbull Canyon, Powder Canyon, Brea Canyon, Brea Canyon and Tonner Canyon but is found elsewhere; stands of southern willow scrub along many of the drainages; scattered freshwater marsh; and coastal sage scrub, found in scattered patches over hillsides throughout.
C) Within Los Angeles County, biotic communities, vegetative associations, and habitat of plant or animal species that are either unique or are restricted in distribution.	Met	All of the plant communities and habitats mentioned above as being restricted in distribution on a regional basis are also restricted in distribution within Los Angeles County.
D) Habitat that at some point in the life cycle of a species or group of species, serves as concentrated breeding, feeding, resting, or migrating grounds and is limited in availability either regionally or in Los Angeles County.	Met	This SEA represents the only large complex of multiple, relatively undisturbed habitats in southeastern Los Angeles County. As such, it is regionally important to many resident species as well as migrating species which would otherwise not be able to meet their habitat requirements here. In particular, large mammal and overwintering bird of prey and songbirds make use of this area.
E) Biotic resources that are of scientific interest because they are either an extreme in physical/geographical limitations, or represent unusual variation in a population or community.	Not met	The proposed SEA does not contain biotic resource that are clearly an extreme in physical/geographical limitations, or represent unusual variation in a population or community and therefore does not meet this criterion.
F) Areas that would provide for the preservation of relatively undisturbed examples of the original natural biotic communities in Los Angeles County.	Met	Both the oak woodlands and walnut woodlands within this SEA represent excellent relatively undisturbed examples of their type. The walnut woodlands in this area are reported to be the best remaining stands of these trees south of Ventura County.



- Proposed SEA Boundary
- Existing SEA Boundary
- Angeles National Forest

**Puente Hills
Significant Ecological Area
Existing and Proposed Boundaries**

DIVIDER PAGE

SANTA CATALINA ISLAND

Location: The proposed Santa Catalina Island Significant Ecological Area (SEA) is located on the Island of Santa Catalina off the Southern California coast. The island lies approximately 22 miles south of Palos Verdes Peninsula and 27 miles southwest of the Orange County shoreline. Except where disturbed, all existing Santa Catalina Island SEAs have been incorporated within the proposed SEA.

Description: Santa Catalina Island is approximately 21 miles long and eight miles wide. The Island consists of two parts connected by a low-lying isthmus at Two Harbors. The larger (southeastern) portion can be generally characterized by rolling hills with a gradual descent into the sea. The smaller (northwestern) part is extremely steep and rugged with steep shoreline palisades. The proposed Santa Catalina Island SEA covers 46,537 acres, nearly all of the Island, and includes a variety of topographic features.

Existing Land Use: The proposed Santa Catalina Island SEA currently supports few developed land uses. Nearly all of the land within the proposed SEA is undisturbed open space supporting native vegetation. Other land uses include low density residential and commercial in the community of Two Harbors and many small camp facilities scattered around the Island's shoreline and interior.

Ownership: Landownership within the proposed Santa Catalina Island SEA consists of both public and private holdings. The majority of the Island, approximately 86 percent, is privately owned by the Santa Catalina Island Conservancy. The Santa Catalina Island Company owns eleven percent of the Island. An additional two percent is owned by various private owners. Public ownership is limited to the remaining one percent held by the City of Avalon.

Vegetation: Vegetation within the proposed Santa Catalina Island SEA is composed of a variety of unique community types including maritime succulent scrub, southern coastal bluff scrub, island chaparral, island oak woodland, ironwood woodland, island cherry woodland, non-native grassland, native grassland, and disturbed vegetation.

Wildlife: Wildlife within the proposed SEA is diverse and abundant due to the large acreage of natural open space and the diversity of habitat types. While a few wildlife species are entirely dependent on a single vegetative community, the entire mosaic of vegetation communities within the study area and adjoining areas constitutes a functional ecosystem; this applies to a variety of wildlife species, both within the SEA and as part of the regional ecosystem.

Wildlife Movement: Areas that bottleneck or concentrate wildlife movement are uncommon on the Island due to the abundance of uninterrupted open space and the lack of disturbed areas. In general, movement takes place in large drainages, along ridge lines, and along dirt roads. However, the small isthmus at Two Harbors represent a significant reduction in the ability of animals to move freely between the two parts of the Island.

Sensitive Biological Resources: Sensitive plant communities within the proposed SEA include: maritime succulent scrub, southern coastal bluff scrub, island chaparral, island cherry woodland, island oak woodland, island ironwood forest, and native grassland. The SEA includes a large number of sensitive plant and animal species known to exist or potentially occurring within the SEA such as: Lyon's pentachaeta, beach spectaclepod, Santa Cruz Island rock cress, island rush-rose, Catalina Island mountain mahogany, the California brown pelican, bald eagle, peregrine falcon, and many others.

Regional Biological Value: The proposed SEA meets several SEA designation criteria and supports many regional biological values (see Criteria Table at the end of this summary). These values include all known populations of several Catalina Island endemic species and other species indigenous to the Channel Islands and several plant communities which are restricted in distribution in the Southern California region and in Los Angeles County, namely maritime succulent scrub, southern coastal bluff scrub, island chaparral, island cherry woodland, island oak woodland, island ironwood forest, and native grassland which are scattered throughout the SEA. Nearly all of the plant communities within the proposed SEA are unique in their species assemblage and are therefore of interest to science. Additionally, many species are either endemic to the Island or are unique variations of mainland species. The SEA encompasses large, mostly undisturbed examples of each of the original island community types including maritime succulent scrub, southern coastal bluff scrub, island chaparral, island oak woodland, island ironwood forest and island cherry woodland.

Recommended Management Practices: Proposed new development within the proposed Santa Catalina Island SEA should be designed to be highly compatible with the continued ecological function of each of the component biological resources described above. In order to preserve the integrity of the SEA, the proposed comprehensive management practices described in the *Los Angeles County SEA Update Study 2000 Background Report* are recommended. These practices address:

- Core habitat
- Habitat linkages and wildlife corridors
- Fire management

- Public access and recreation
- Infrastructure
- Wetlands, riparian habitats, and streambeds
- Non-riparian/upland woodlands

In addition to the comprehensive management practices the following proposed management practices are recommended specifically for the proposed Santa Catalina Island SEA:

- Maintain the habitat of populations of listed species including the federally and state endangered Catalina Island mountain mahogany, the federally endangered Santa Cruz Island rock cress, and the federally threatened island rush-rose. Also maintain populations of extremely rare or endemic species such as Catalina Island manzanita, Catalina dudleya, Santa Catalina monkey flower, Trask's yerba santa, St. Catherine's lace, Catalina ironwood, the Catalina wild-tomato, Santa Catalina desert thorn, *Phacelia lyonii*, Nevin's wooly sunflower, wild apple, California dissanthelium, bush-snapdragon, Nevin's gilia, hairy figwort, *Lotus argophyllus ornithopus*, southern island clover, *Trifolium microdon pilosum*, *Ceanothus arboreus*, Green's dudleya, *Ceanothus megacarpus insularia*, island poppy, island tarplant, *Heteromeles arbutifolia macrocarpa*, island jepsonia, southern island mallow, island broom, island oak, and *Rhamnus pirifolia* as well as adequate buffers to eliminate or minimize adverse impacts.
- Retain rare communities with adequate buffers so as to allow for the long term viability and integrity of plant communities as a whole. Rare communities include: maritime succulent scrub, southern coastal bluff scrub, island chaparral, island cherry woodland, island oak woodland, island ironwood forest, and native grassland
- Maintain distribution extremes of communities or species and endemic communities or species with the goal of retaining their long term viability and integrity.
- Allow impacts associated with restoration if the long term benefits to the biological resources of the Island are the clear objective (where applicable, refer to conservation easement guidelines).

**CRITERIA ANALYSIS
OF THE PROPOSED SANTA CATALINA ISLAND SEA**

Criterion	Status	Justification
A) The habitat of core populations of endangered or threatened plant or animal species.	Met	The proposed SEA encompasses nearly all known populations of Santa Catalina Island endemic species including the federally and state endangered Catalina Island mountain mahogany. Several other species indigenous to the Channel Islands are within the SEA including the federally endangered Santa Cruz Island rock cress, and the federally threatened island rush-rose. Many additional unlisted species which are equally rare have all or much of their range represented within the SEA.
B) On a regional basis, biotic communities, vegetative associations, and habitat of plant or animal species that are either unique or are restricted in distribution.	Met	Several plant communities within this SEA have restricted distribution in the Southern California region. These communities include: maritime succulent scrub, southern coastal bluff scrub, island chaparral, island cherry woodland, island oak woodland, and island ironwood forest.
C) Within Los Angeles County, biotic communities, vegetative associations, and habitat of plant or animal species that are either unique or are restricted in distribution.	Met	All of the plant communities mentioned above as being restricted in distribution on a regional basis are further restricted in distribution within Los Angeles County. These communities include: maritime succulent scrub, southern coastal bluff scrub, island chaparral, island cherry woodland, island oak woodland, and island ironwood forest which are scattered throughout the SEA.
D) Habitat that at some point in the life cycle of a species or group of species, serves as concentrated breeding, feeding, resting, or migrating grounds and is limited in availability either regionally or in Los Angeles County.	Met	The proposed SEA is likely to serve as a concentrated resting and feeding area for marine mammals such as sea lions and for coastal nesting sea birds.
E) Biotic resources that are of scientific interest because they are either an extreme in physical/geographical limitations, or represent unusual variation in a population or community.	Met	Several of the plant communities within the proposed SEA are unique in their species assemblage and represent geographic limits of the community and are therefore of interest to science. Additionally, many species are either endemic to the Island or represent unusual variations of mainland species.
F) Areas that would provide for the preservation of relatively undisturbed examples of the original natural biotic communities in Los Angeles County.	Met	The SEA encompasses large, mostly undisturbed examples of each of the original island community types including maritime succulent scrub, southern coastal bluff scrub, island chaparral, island oak woodland, island ironwood forest, and island cherry woodland.



**Santa Catalina Island
Significant Ecological Area
Existing and Proposed Boundaries**

- Proposed SEA Boundary
- Existing SEA Boundary
- Angeles National Forest



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